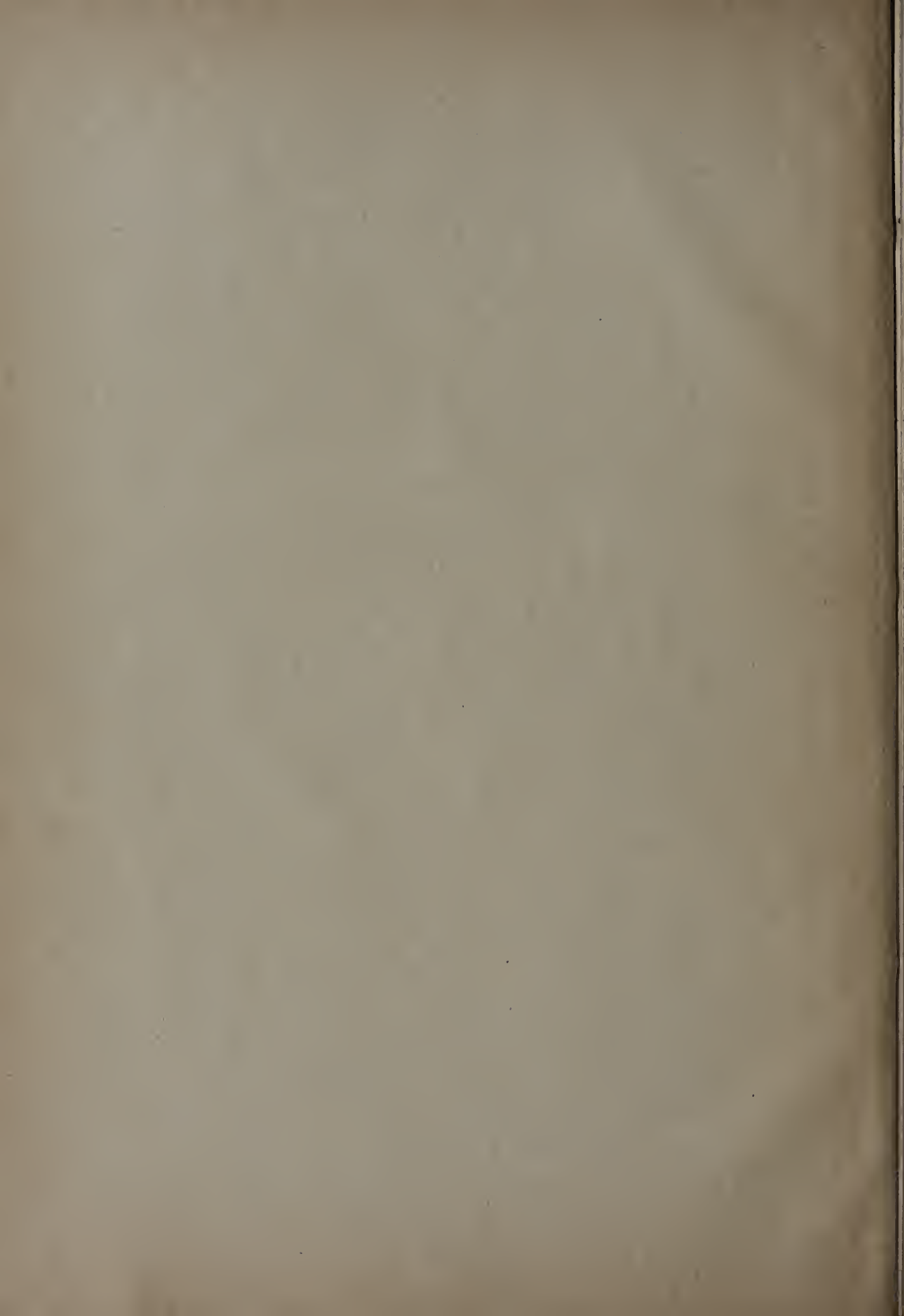
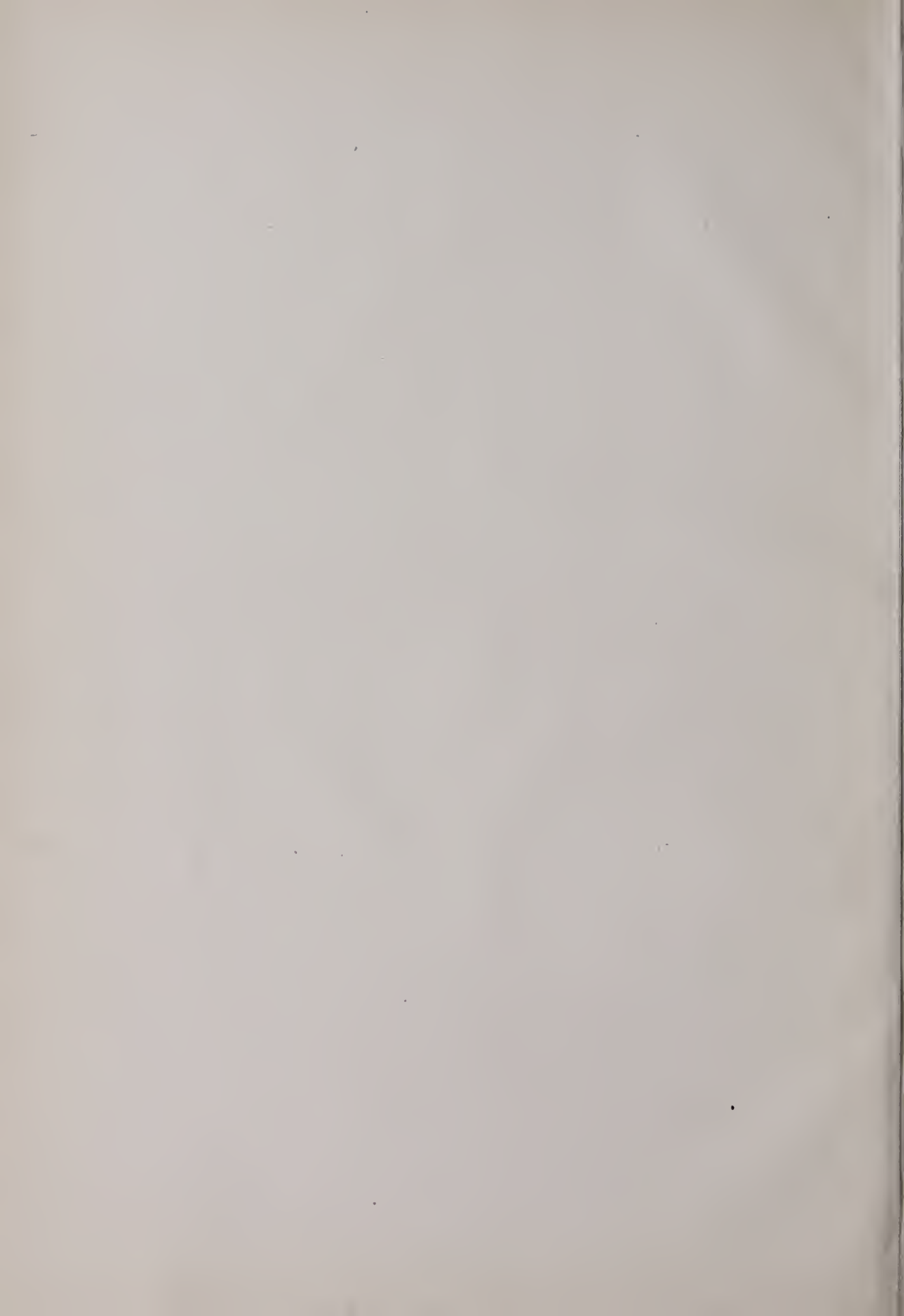


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THE RHODE ISLAND MEDICAL JOURNAL



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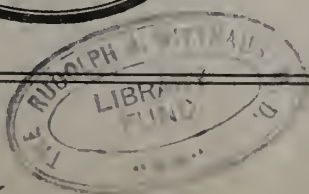
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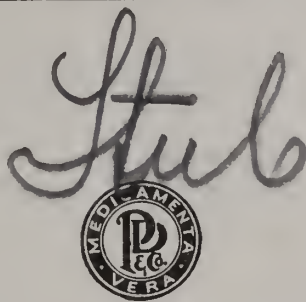
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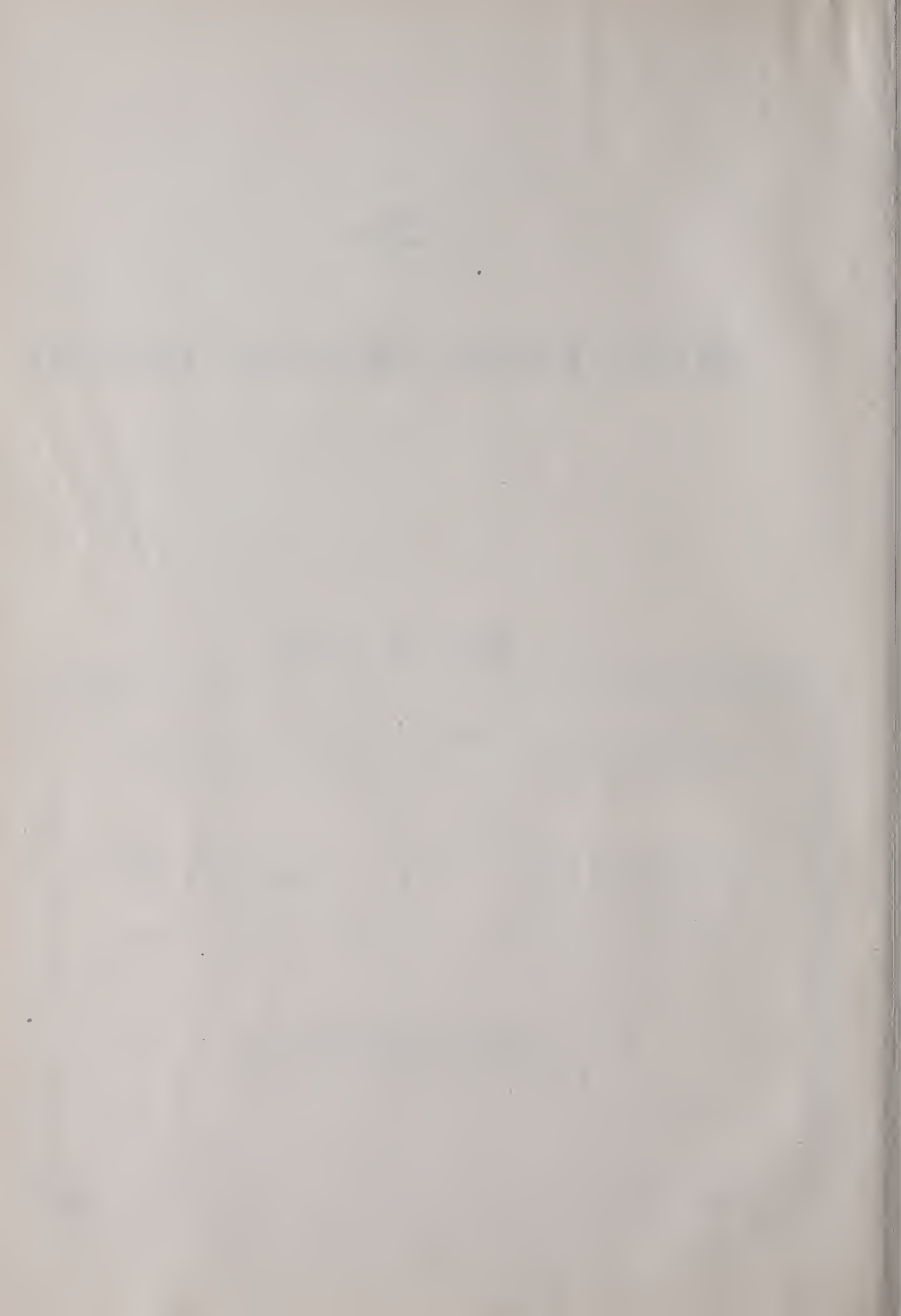
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Vol. V, 1922

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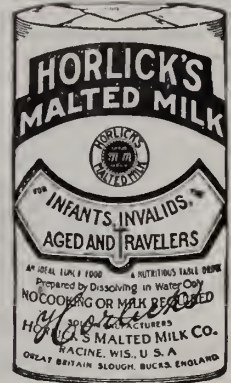
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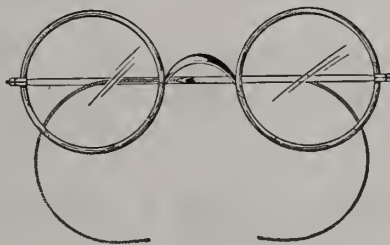
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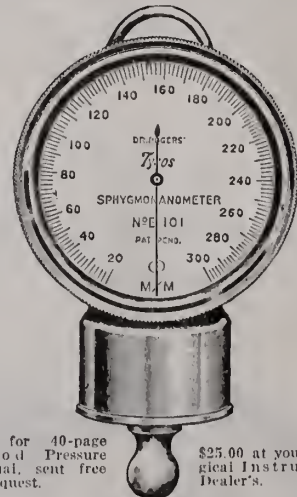
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VOLUME V {
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PROVIDENCE, R. I., JANUARY, 1922

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ORIGINAL ARTICLES

OBSERVATIONS ON ACUTE APPENDICITIS.*

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Providence, R. I.

Acute appendicitis is not only the most common surgical disease of the abdomen, but it is also one of the most serious. During the past fifteen years no papers on the subject have been presented before this Society. The diagnosis of acute appendicitis should be thoroughly understood by every man in general practice or surgery. At first thought, this statement might seem superfluous, but the increasing number of neglected cases coming under observation, particularly in hospital practice, proves otherwise.

It is hoped that a consideration of this disease today will result in a more careful study of acute abdominal cases and an earlier diagnosis of acute appendicitis. Why is early diagnosis important? Because the mortality is practically nil in cases which are operated upon early in the disease; vice versa, the mortality is high in cases operated upon late. After the infection has invaded the peritoneum and resulted in peritonitis, either localized or general, the disease becomes much more serious and the mortality is high.

Acute appendicitis is at first a local disease because the infection is confined to the appendix itself. Later, the disease spreads to the peritoneum and peritonitis ensues. The peritonitis may localize and an abscess form, or it may progress and a general peritonitis ensue, which is often fatal. If the diagnosis can be made within the first twelve hours of the onset of symptoms, a prompt operation, with removal of the appendix and closure of the incision without drainage, will usually result in a prompt recovery. If, however, peritonitis has set in, the peritoneum must be drained; the patient has not only to fight the effect of the operation, but must also overcome the peritonitis. Often he is unable to do this, and a case

dies that might have been saved by earlier diagnosis and earlier operation.

In looking over the histories of a large number of neglected cases, I am convinced that two wrong principles of so-called medical treatment are partly responsible for the errors in diagnosis and the hastening of perforation of the appendix.

The first is the administration of morphine to relieve the initial pain before any diagnosis has been made. Before giving any narcotic, every effort should be made to establish the diagnosis, for as soon as a patient is under the influence of morphine, the symptoms are masked. Spasm and rigidity, very important signs, disappear; the patient feels better, but when seen later in the day, it is impossible to make a diagnosis. In fact, morphine should be withheld until the diagnosis of any acute abdominal case is established and the treatment is decided upon.

The second far too common error in treatment is the administration of cathartics, usually castor oil, calomel, or salts. Any one of these three excites a violent peristalsis and not only tends to spread the infection over the peritoneum, but in many cases actually induces a perforation of the appendix. Many patients attribute the onset of symptoms of acute appendicitis to indigestion following some indiscretion in diet, such as a shore dinner, an extra large meal on a holiday, Thanksgiving or Christmas, or the eating of green apples or mushrooms. Many of them take the cathartic without medical advice; a good many have it prescribed for them. We must, however, refrain from catharsis in any case of suspected acute abdomen until we are sure of our ground.

An unusual case illustrating the effect of delay and neglect was that of a boy seventeen years of age, who entered the Rhode Island Hospital on September 26, 1921, with the following history:

Four weeks previous he began to have pain in the lower right quadrant, accompanied by nausea and vomiting. He was treated for this condition with local applications of ice and poultices. Later the skin over the lower right quadrant of the abdomen and the upper part of the thigh sloughed away, leaving a very foul-smelling, discharging

*Read before the Rhode Island Medical Society, December 1, 1921.

abscess cavity. Examination showed an extremely emaciated young man who appeared very toxic and was in extremis. The heart was rapid and the sounds were of poor quality. There were moist rales at the base of both lungs. The abdominal wall over a large part of the lower right quadrant had sloughed away, showing a deep abscess cavity filled with thick, greenish, foul pus. Pressure at the right lumbar region and at the right costal margin caused pus to well up in the wound. The skin over the upper anterior and medial aspect of the right thigh had sloughed away, exposing the muscles and the great vessels in Hunter's canal. Probing with a soft rubber catheter showed the abscess cavity to extend upwards to about the costal margin in the anterior axillary line, medially to the median line and laterally, to the lateral abdominal wall and downwards, to the pelvis. The patient died the next morning.

THE DIAGNOSIS OF APPENDICITIS.

In a typical case the symptoms are somewhat as follows: The onset of the disease is almost always ushered in with severe abdominal pain. The diagnosis must be viewed with suspicion if pain is not the first symptom. The patient, previously in good health, is seized with severe abdominal pain, over the whole abdomen. However, the first pain may be referred to the epigastrium or it may be in the appendix region. The pain is usually followed by nausea and vomiting. In a few hours the pain localizes in the right iliac fossa and the patient is exquisitely tender at McBurney's point. The temperature is usually elevated but it may be normal.

The pulse is usually accelerated. There is marked rigidity or spasm of the right rectus muscle. Constipation is usually present, diarrhoea occasionally. Bladder symptoms may be present when the appendix is long and hangs over the brim of the pelvis. The pain and tenderness are occasionally referred to the left iliac fossa or they may be referred high up on the right side when the appendix is retro cecal, extending towards the liver.

Examination of the blood at this time will usually show a marked leucocytosis and an increased percentage of the polynuclear cells. If the resistance of the patient is poor, there will be little or no increase in the number of leucocytes.

The polynuclear cells will have been, in my experience, always relatively increased, varying from 80 to 95 per cent. A low leucocyte count and a high relative polynuclear count always indicate a severe lesion and poor prognosis.

The severest types of appendicitis occasionally present the mildest symptoms. It is in these cases that the blood examination is especially valuable. In one case where the symptoms were mild, a leucocyte count showed 9,000 cells. The percentage of polynuclear cells was eighty-six. Operation was performed promptly and the appendix was found ready to rupture and full of pus. In another case, with symptoms suggestive of appendicitis, a normal leucocyte count and a low percentage of polynuclear cells, ruled out an acute inflammatory process and a needless operation was avoided.

We should not neglect the general physical examination. We are often inclined to examine the abdomen alone and to neglect the general examination. Many a case of frank pneumonia has been submitted to needless abdominal operation, due to failure to examine the chest, and not a few cases of gastric crises have been operated upon needlessly, due to failure to examine reflexes. Furthermore, many healthy appendices have been removed, due to failure to examine the urine, which would have given a clue to the presence of a renal calculus or a pyelitis.

The symptoms and signs in acute appendicitis are usually clear and unmistakable. As soon as the diagnosis is established, the appendix should be removed unless there are absolute contra indications. The treatment of the acute appendix is surgical; it is not medical. The infected appendix should be speedily removed. During the first twelve or eighteen hours following the onset of the disease, the abdomen can usually be closed without drainage and the patient will make a prompt recovery. When the peritoneum, however, becomes involved, drainage must be employed. If the patient recovers, convalescence is prolonged; if he does not recover, it is a catastrophe.

During fourteen years of hospital practice, I have had an opportunity to observe and operate upon a large number of cases of acute appendicitis. I have been impressed by the large proportion of cases entering the hospital with well-developed

peritonitis. I think that with a little more study these cases can be recognized earlier and operated upon earlier. The mortality in appendicitis is largely the mortality of delay. As previously stated in this paper, morphine and cathartics are dangerous drugs to use before any diagnosis has been made. Morphine hides symptoms; cathartics encourage perforation of the appendix and the development of peritonitis.

The following case is one which was treated by cathartics, medicine, and delay.

The patient was a woman thirty-one years of age, who was seized four days previously with severe pain in the right lower abdomen and vomiting. A doctor was called, who ordered cathartics and medicine. She continued to grow worse. Three days later she had a sudden attack of sharp abdominal pain, after which she felt better for a time. The following day she was much worse, was distended, cyanotic and in extremis. At this time, she presented the classical picture of general peritonitis and she died in a few hours. The first diagnosis in this case was made four days after the onset of symptoms.

In concluding, I wish to make a plea for a more careful study of all acute abdominal cases. Morphine and cathartics should be avoided. A complete physical examination should be made in every case. The leucocyte count and estimation of the percentage of polynuclear cells is often of great assistance in the diagnosis. As soon as the diagnosis is established in acute appendicitis, the treatment is prompt operation. If doubt exists, the doubt should be cleared up by operation and not by delay. The mortality in acute appendicitis is chiefly the mortality of delay and neglect.

SURGERY IN DIABETICS.*

DR. GEORGE W. GARDNER,
Providence, R. I.

I am to give you my impressions from observation of some diabetics and a study of the records for the past five years at the Rhode Island Hospital.

It must immediately occur to you, as it did to me, that the subject of Surgery in Diabetes must

be divided into two classes. The first, to include all surgical conditions not due to the disease, although often much influenced by it; the second, conditions commonly believed to be due to diabetes. In the first class, traumatism and infection. In the second class, carbuncles and gangrene.

While such a division may be of some service and will be used later in the paper, it is but fair to say that it is not a very scientific nor very satisfactory classification, for both carbuncles and gangrene of the second class depend in part, at least, upon infections.

Before taking up the surgical aspects, I wish briefly to state a few facts, or opinions, gained by a study of recent literature. Men, whom we recognize as authorities, differ on many points. While it is true that sugar in the urine is characteristic of diabetes, it is very far indeed from being the only or even the most important characteristic. Sugar is easily detected in the urine and can be greatly diminished by dietetic treatment. But coma, which carries off more than half the cases, is associated with, or caused by, an acidosis apparently independent of the presence of sugar in the urine. In fact, the disease is far from the simple one of earlier teaching, some facts about it are clear but some are obscure and contradictory. The treatment brought out by Allen and developed by Joslyn, made easy for the doctor, though often hard for the patient, is now being questioned by other authorities, as discussed by Dr. Fulton in the last number of the *Rhode Island Medical Journal*. Briefly, the latest treatment is avoidance of starvation and under-nourishment by a great increase of fats. However, it was only the other day that we were told to go easy on fats, as increase of fats caused acidosis and coma, and only a little while before this, fats were given without measure—in scriptural terms, fat years are followed by lean.

Again with the giving of alkalis, then you did give them and now you don't. Apparently, if one holds on to discarded treatment long enough he will again be in fashion. It is not at all in my province to discuss these medical questions. Confused and divergent as some of the ideas of treatment are, the fact is undisputed that the medical dietetic treatment has worked well in most cases. The surgeon, however, is interested in the failures, for the failures come his way.

*Read before the Rhode Island Medical Society, December 1, 1921.

I have studied the Rhode Island records for the last five-year period.

I attempted a tabulation and synopsis but soon found that the cases had little in common, and the histories, while probably as full as we would have written them, were very uneven and difficult to use in comparisons.

I offer the following statistics in separate groups with a few explanatory remarks or conclusions at the end of each group of cases:

Surgical conditions complicated by the presence of diabetes. Fractures—Femurs, two, operation none, anesthetic none; one improved, one dead. Humerus, one, operation none, anesthetic none, one dead; Femur and Humerus, one, operation none, anesthetic none, one dead.

Sepsis—Septic hand, one, incision, gas anesthesia, well. Furunculosis, one, incisions, local anesthesia, well. Endometritis, one, curettage, ether anesthesia, improved. Double cataract, one, removal, cocaine anesthesia, improved. Inguinal hernia, one, radical cure, local anesthesia, improved. Single cataract, one, removal, cocaine anesthesia, improved. Cervical abscess, one, incision, local anesthesia, improved.

Surgical conditions complicated by Diabetes—Enlarged prostate, retention, one, catheter and sounds, ether, followed by supra pubic puncture, local anesthesia, dead.

Acute Gangrenous Appendicitis, one, appendectomy, ether, drainage, forced alkalies for days, dead on fourteenth day.

Septic supra pubic sinus, one, incision of abscess, sounds, cocaine, dead.

Strangulated umbilical hernia, one, open reduction, novocaine, dead.

Cystocele rectocele and cervical tears, one, amputation of cervix and repair of perineum, ether, coma, discharged against advice, death imminent.

Out of four fracture cases three deaths from coma within a few hours; of minor surgical cases done under local anesthesia, five cases, four recoveries, one death; of two minor cases done under ether, one recovery, one death; of two major cases done under local anesthesia, one recovery, one death; of two major cases done under ether, two deaths.

I think even this small series helps us to agree with the generally accepted surgical opinion that

ether is contra-indicated in diabetes. I have known of several cases of diabetes requiring major surgical operations which recovered and I believe many successfully operated cases at the Rhode Island Hospital were not charted with the associated disease diabetes and, therefore, not found by me. It is human nature to put down every extenuating circumstance in operative failures, and let success through with a careless record. However, it is obvious that diabetes carries a great added risk to any operation, and operations should be done only when imperative.

Statistics on Carbuncle—One case, local anesthesia, dead; two cases, ether, one improved, one dead; four cases, gas oxygen, three improved, one dead; seven cases, four improved, three dead.

It is probable that some cases of carbuncle are not included in this list, especially fatal cases, as only carbuncle cases with sugar in urine were taken, and it often happens that terminal cases of diabetes do not show sugar in the urine. My only observation on carbuncle is, that it is a condition demanding immediate surgical attention. The septic absorption increases the danger. Force fluids, increase carbohydrates, cut down fat, stimulate, and use gas oxygen. Protect patient from needless exposure.

Gangrene of toes or foot—Total number of cases, twenty-five, number of cases not operated on, eleven; of this number six died, two discharged against advice, presumably to die; two local condition improved, one locally healed.

Number of cases toe amputation, four; three cases discharged against advice, presumably to die; one case discharged to medical service, later operated, was the one case locally healed. Number of cases foot amputation, two; both had gas oxygen, both died.

Number of cases lower leg amputation, four; three died, one with ether, two with gas oxygen; one case healed, gas oxygen given.

Number of cases thigh amputation, four; all had gas oxygen; three died, one discharged against advice, presumably to die.

Twenty-five cases, fourteen deaths, six discharged against advice, clearly according to history, in coma, and about to die, two improved and kept on a diet, and three locally healed.

The cases varied greatly in many ways: Some had been under dietetic treatment, some were of

short duration, some of long standing with great amount of sepsis. In the series we had 8% definite improvement, and 12% local cure, but the startling figure of 80% mortality stands.

It thus appears, that under whatever treatment employed, gangrene must be recognized as a terminal condition.

I believe the only possible betterment of these statistics can come by a closer association of medical and surgical services.

While I have felt that a thigh amputation offered the best chance, I think now from a study of these records that careful antiseptic treatment of the gangrene and close attention to the diet, checked up by careful laboratory work, with as little surgery as possible, offers a lesser risk. In any case, it is an almost hopeless situation.

THYROID DISEASE AND ITS TREATMENT.*

DR. FRANK H. LAHEY,
Boston.

It is no less true with thyroid conditions than with other diseases that a correct grouping is essential before adequate treatment can be assigned. And with this in mind it may be wise for me to go over the clinical classification of thyroid disease as employed by us and specify what, in our opinion, are the indications for operation in each group.

In adolescent goitre, the slight symmetrical enlargement occurring for the most part in the isthmus and appearing in young girls at or soon after the establishment of the menses, we have not found that there has been a need for any treatment. The prominence of the isthmus, if it is a true increase in size and not the result of a thin neck, disappears as the girl increases in age and acquires a somewhat greater increase in subcutaneous fat. We have tried iodine in the form of sodium iodide, syrup of hydriodic acid, and potassium iodide, and have not noticed any appreciable change in size. This is a different type of goitre from the colloid adolescent goitre seen in goitre belts and responding to the sodium iodide prophylaxis of Kimball and Marine.

We have occasionally had diagnostic difficulties

in this group of pubescent cases when the slight enlargement has been associated with a tachycardia without other signs indicating the presence of hyperthyroidism. This has occurred several times in our experience and has made the decision as to whether the tachycardia was of thyroid or non-thyroid origin quite difficult. In such a case we have insisted that the patient report for a series of metabolism tests some days apart, in order that we might determine from several tests whether the trend of the basal metabolism was along a high or normal level. In addition, we have insisted upon the coöperation of the cardiologist associated with our thyroid group, in order to rule out, if possible, the tachycardias of non-thyroid origin. It has been our experience that when a persistent tachycardia is of thyroid origin, the confirmatory signs, such as staring, loss of weight, myaesthesia, tremor, or nervousness are rarely absent and that when such a tachycardia is present without these signs, even though there be a slight goitre or even a moderately increased basal metabolism rate, one should be extremely cautious in attributing the tachycardia to hyperthyroidism. We feel certain that some of the non-successes ascribed to surgery must be due to a too hasty decision that a persistent tachycardia is the result of thyroid disease. It is in these doubtful cases that delay and deliberation are justly rewarded. We have seen a great many cases of goitre without hyperthyroidism. We have also seen a great many cases of hyperthyroidism with little or no goitre. Likewise, we have seen many cases with increases in basal metabolism, even with tachycardia, in which no hyperthyroidism was present. Conversely, however, we have never seen cases of hyperthyroidism in which both tachycardia† and increases in basal metabolism were not present.

Cysts and adenomata we have operated upon for one or more of the following reasons: When they are unsightly; when they have, or threaten to, become intrathoracic in location; when they are producing pressure; and in adenomata, when they are causing secondary hyperthyroidism. In adenomata, further, we believe that as patients approach the age in which the incidence of malignancy increases, removal should be advised because of the possibility of this complication.

†Unless examined during and after a considerable period of rest in bed.

*Read before the Rhode Island Medical Society December 1, 1921.

It has been our conclusion, after dealing with a great many cases of adenomata of the thyroid, that the possibility of intrathoracic location of adenomata has by no means been appreciated by those whose practice is not of the type to provide a great variety of thyroid lesions, and that in all cases of intermittent attacks of respiratory difficulty the question of intrathoracic goitre should be determined by X-ray.

We have operated upon colloid goitres when they have, or threatened to, become intrathoracic in location—and a great many do; and when they have been associated with hyperthyroidism.

Malignancy of the thyroid in our experience has been an extremely depressing phase of thyroid disease. The only light we are able to see in connection with this almost hopeless group of cases is in removal while still in the precancerous stages of the adenomatous goitres which are present in patients in or approaching the cancer age. Our experience has been similar to that in other clinics, in that we have seen malignant disease appear only in those thyroids which have been goiterous for some time.

We have, with the exception of the X-ray clinic at the City Hospital, where X-ray treatment is being carried out, submitted all cases of hyperthyroidism of any marked degree of toxicity to surgery, the eventual aim of which was the removal of a large proportion—four-fifths or more—of the entire gland. We have been led to pursue this course, first, because the mortality had always been within reasonable limits, 2.5%, in the entire series, 1.28% in this year's series; and, second, because we feel that in our hands it has proved the measure which most certainly, most completely, most permanently, and most quickly produces relief in this group of cases. We know that certain cases of hyperthyroidism present remissions which are permanent in character, and we believe that all that may be accomplished by medical treatment consists of prolonged rest, first, with the purpose of protecting the patient from such injurious effects of loss of metabolism balance as are more obvious and more apt to occur in patients up and about; and, second, with the hope that a period of remission will occur while at rest and prolong itself into a permanent remission.

Against this course are the relatively small num-

ber of cases obtaining a permanent remission, the fact that many become poorer operative risks, the small but certain number of deaths that may be attributed to this delay, and the undesirable consequences of prolonging the period during which the organism suffers the effects of the intoxication.

Regarding X-ray treatment, we feel that any measure assuming the attitude of a rival to surgery, since the latter has been generally accepted as the most satisfactory method of treatment in hyperthyroidism, should be readily capable of demonstration of its value. We feel, further, for the purposes of personal conviction and with no reflection on the clinics where X-ray is deemed a satisfactory measure, that its value should be demonstrable in a clinic under our management where the selection of cases is ours and where the interpretation as to cure or relief is also ours.

For this purpose, about eighteen months ago we established at the Boston City Hospital a thyroid clinic, where cases of hyperthyroidism are treated only by means of X-ray. In this clinic we have yet to see a case which even approaches the completeness of the relief accomplished by surgery. To be sure, our cases have been limited in number. A great many cases have been sent for treatment which were not cases of hyperthyroidism, and every precaution has been taken to eliminate every case which did not belong unquestionably under the head of hyperthyroidism. A sufficient number have been treated, however, so that at least a few striking results should have been obtained. In fairness to X-ray, it should be said that a larger series of cases should be treated before a final decision as the result of this study is reached. Further, that we, as clinicians, not as trained Roentgenologists, have no check upon the dosage being used. However, in this direction, we have every confidence of the accuracy of dosage, as the treatment is conducted by a Roentgenologist trained in the X-ray clinic at the Massachusetts General Hospital. In addition, we have submitted to the Roentgenologist a few cases of incomplete cures following surgical removal, particularly where too little had been removed and hypertrophy of the small remaining segment had occurred, and in none of these cases has relief been accomplished by X-ray, while very prompt relief has resulted from the removal of a considerable portion of the remaining segment.

Because of the above-mentioned reasons, therefore, it is our conviction that surgery, with its proved efficacy should be the accepted method of treatment in any thyroid clinic dealing with thyroid cases in large numbers, and that X-ray treatment should be reserved largely for an experimental clinic such as that which we are maintaining at the City Hospital.

We have operated upon a number of cases which have received many X-ray treatments, and we cannot see that they increase the difficulty of the operation.

We have now made over one thousand metabolism tests on over five hundred patients, each operated case having a metabolism test previous to each operative procedure and, if possible, one every two weeks between operative procedures if the poles have been ligated, while, furthermore, all patients showing increase in rate before operation have had their metabolism estimated before leaving the hospital. After leaving the hospital, all toxic cases have returned in two months for another test and in six months for still another one, in order that a control may be maintained on them. While all of the material accumulated as the result of this work has as yet not been completely grouped and studied, there are certain facts which have impressed us as being probably acceptable. The first and most important one, in our opinion, is that hyperthyroidism has not occurred in this group without an increase in basal metabolism rate, and we feel strongly that operations undertaken upon patients with normal metabolisms will yield consistently poor results, since in most of the cases the symptoms will not have been of thyroid origin; second, that there are many borderline cases of neuroses closely simulating but not actually presenting hyperthyroidism, particularly those cases having associated tachycardias.

In this group repeated metabolism estimations should be made. In a majority of these cases the metabolism estimations will be found to be within or approximating normal limits, and in the remainder, even though the metabolism be increased (it will rarely run above +25 in cases of this type) decision in favor of hyperthyroidism should not be made unless very characteristic clinical signs are present as confirmatory evidence. We are certain from experience based upon constant reference of this condition to us that there are today

literally hundreds of cases of neuroses under treatment for hyperthyroidism, many of whom are doubtless being operated upon.

As the result of the study of this material, we are convinced that basal metabolism tests properly conducted represent approximately the degree of toxicity of the disease. We cannot subscribe to any statement that it accurately represents toxicity, first, because as yet the method and process of intoxication is not determined, and, second, because the only two methods of gauging toxicity at present are the effects of the condition on the one hand upon the metabolism, and on the other, upon the patient's organism, and unfortunately they sometimes do not check accurately, for now and then we see patients who are clinically quite toxic, yet have but moderately increased metabolism rates; likewise, the reverse has also been true occasionally.

Following ligation of poles, it has been the rule to see a drop in pulse rate, a gain in weight, and a fall in metabolism rate. In a not inconsiderable number of cases we have seen a drop in pulse rate, a gain in weight, a general clinical improvement, but a rise in metabolism rate. We were much disturbed by this at first, but where the clinical improvement has been obvious, the cases have endured well the final procedure of partial thyroidectomy. We are, however, as yet at a loss to explain this apparent inconsistency to our satisfaction.

The drop in metabolism following partial thyroidectomy has been consistent and certain. An investigation of the pre- and post-operative metabolism rate in the last one hundred thyroidectomized cases of primary hyperthyroidism, the last test being made within an average of ten days after the partial thyroidectomy, showed an average drop of 66%. Many cases, however, do not completely reach normal until a few weeks after leaving the hospital, and it has been our experience that in those cases persisting with moderate increases in metabolism rate, moderate symptoms of hyperthyroidism still persist because sufficient thyroid tissue has not been removed, and a further drop can be accomplished by further removal.

Finally, as the result of our experience with the metabolism test in this disease, we are sure that it is a very grave error to consider thyroid disease in terms of increased metabolism and that such a

test can be of as much harm as good unless carefully weighed and co-related with the history and clinical signs presented by the individual.

In the past year and a half we have had Dr. Burton Hamilton associated with us in the thyroid clinic in an attempt to obtain some accurate knowledge of thyroid hearts; at our request he has submitted the following short résumé as the result of his observations on the cases in our clinic for those eighteen months.

Hearts in hyperthyroidism fall into two classes. There are very few intermediate cases. The larger class shows no signs on clinical examination, or in graphic tracings, of heart damage. Patients of all degrees of toxicity (up to death), and of short and long duration of their hyperthyroidism, are in this class. Nor has heart failure occurred here. In fact, if these patients are cured of hyperthyroidism, they are left with sound hearts, so far as can be told.

The smaller class shows definite heart damage, with occurrences of heart failure. Auricular fibrillation appears here, a condition that can always be improved by digitalization. In our clinic 25% of such cases in the last eighteen months have been cured of auricular fibrillation after operation and digitalization. On the other hand, we see no reason for digitalization of hyperthyroidism cases that do not have auricular fibrillation.

For the purpose of reporting immediate statistics of the clinic, this year's cases have been taken. Since January 1, 1921, up to today, 313 thyroid operations have been done. Ligations of one or both superior poles have been done 58 times, with one death. Ligations of one or both inferior thyroid arteries behind the internal jugular and on the inner border of the scalenus anticus has been done 12 times, with no deaths. Injection of boiling water has been made 20 times with no deaths, and 223 operations directly upon the thyroid have been done. Twelve have been hemithyroidectomies on patients deemed too toxic to endure the complete operation. Of these, ten rep-

resent two operations on five patients, each having had two hemithyroidectomies, the decision of the operation in our opinion being wise in order to be certain that the patient could be safely brought through the procedure of getting out enough thyroid tissue. The remaining two are cases in which the final hemithyroidectomy is to be done shortly.

There were two cases of tetany of short duration this year and, strangely, none in the cases previous to this year, considerably over five hundred in number.

There were five cases of malignancy this year and all are dead with the exception of one recent case in which a specimen was removed for pathological report. This measure we consider wise unless clinically there is no doubt whatever as to the malignancy, as we have had three cases of the so-called woody thyroids in which the consistency of the thyroid has been very similar to that of malignant thyroids but has not proved to be malignant on microscopic examination.

We have operated upon one lingual thyroid and in a baby five months old, one large colloid goitre causing pressure.

The total number of deaths has been four—one from thyroidism following ligation of one pole; one from probable cardiac failure in a patient with a past history of cardiac decompensation and with several attacks of auricular fibrillation, upon whom a hemithyroidectomy was done, both poles having been previously ligated; one from pneumonia following the removal of a large intrathoracic and posttracheal goitre; and one of unknown cause in a woman of fifty, strong and well, with non-toxic adenomata, operated in the students' clinic under ether.

In conclusion, while we are fairly well satisfied with this year's mortality rate, 1.28%, we feel that it should be reduced still further, having in mind, however, that mortality in a clinic such as ours, where patients with very serious thyroid lesions are being constantly presented to us, cannot be eliminated without refusing patients of this group.

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A. F. SQUIRE A. CHACE SANFORD	<i>President</i> <i>Secretary</i>	Newport Newport

PAWTUCKET		
Meets the third Thursday in each month excepting July and August		
JOHN F. KENNEY A. H. MERDINYAN	<i>President</i> <i>Secretary</i>	Pawtucket Pawtucket
PROVIDENCE		
Meets the first Monday in each month excepting July, August and September		
FRANK T. FULTON, P. P. CHASE	<i>President</i> <i>Secretary</i>	Providence Providence
WASHINGTON		
Meets the second Thursday in January, April, July and October		
PATRICK J. MANNING W. A. HILLARD	<i>President</i> <i>Secretary</i>	Wickford Westerly
WOONSOCKET		
Meets the second Thursday in each month excepting July and August		
EDGAR F. HAMLIN A. H. MONTY	<i>President</i> <i>Secretary</i>	Slatersville Woonsocket

Section on Medicine—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.
R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. C. J. Astle, President; Dr. J. L. Dowling, Secretary-Treasurer.
The R. I. Medico-Legal Society—4th Thursday—January, April, July and October. Dr. Roswell S. Wilcox, President; Dr. H. S. Flynn, Secretary-Treasurer.

EDITORIALS

OUR ADVERTISERS.

The time-honored phrase that "It pays to advertise" is abundantly evidenced by the expressions of satisfaction voiced by many of our advertisers; while this may well be considered an asset in efficiency, we must continue to merit this appreciation.
In the language of a great American, "It is our plain duty" to patronize those who help to support our JOURNAL.

Not to do so is an evasion of what is expected of us.
The fact that this one or that one is not reached quite so handily may be advanced as a specie of explanation, but it does not rise to the dignity of an excuse.
We make every effort to know that our advertisers are of integrity and worthy of our confidence; manifest to them, therefore, your consideration in a tangible way.

AN EPIDEMIC OF HEALTH.

At the present time the world—or certainly that part within the boundaries of this State—is passing through an epidemic of health. It is evident in the rank and file of the profession and even shows itself in the dry field of vital statistics. What is the reason for this condition?

Some claim that the severe epidemic of 1918 attacked such a large proportion of the population that those who escaped the disease were naturally immune to all respiratory diseases and those who survived an attack gained an active immunity as the result. If this is so, the prospects for the physician in the future are not bright, because it will take almost a generation to build up a race of susceptible victims.

Still others claim that it is an evidence of the conservation of nature. The great war depopulated the world to such a degree that nature must do something to counteract this loss and so certain diseases have declared an armistice to help nature in her effort at armistice.

It is very doubtful whether these reasons and others that have been advanced successfully explain the unusual healthful conditions. Can we not, as a profession, claim some credit for this state of affairs? Surely the emphasis in the last few years has been on the prevention of disease—in the medical schools, in the various organizations doing research work, in the medical journals and even in the popular magazines. It must be that the work is beginning to show results. If this is the true explanation of the present epidemic of health, it illustrates the truth of the remark made by former President Eliot of Harvard to the effect that the medical profession was the only learned profession that was striving to eliminate itself.

EXPANDED LYING-IN SERVICE FOR PROVIDENCE.

Providence is fortunate in possessing an efficient Lying-in Hospital. Handicapped by not possessing the modern buildings and equipment which the hospital deserves, by reason of the high grade of its personnel and management it is doing excellent work. The results of treatment compare favorably with those of the best lying-in hospitals of the country. It is not generally realized that this hospital is one of the largest in the country.

During 1920 there were 1,175 admissions and 1,078 babies were born. During the year 1920 there were admitted to the Boston Lying-in Hospital 1,123 mothers and 977 babies were born.

But there is one service which the Providence Lying-in Hospital does not furnish and a field of work which it should enter; the supervision and delivery of mothers of poor families who do not care to go to the hospital or who for some reason cannot. The midwife has been taking care of a large number of cases of this kind, particularly among the foreign-born. The midwife has served a useful purpose among the poor in many foreign countries but they are not capable of furnishing the skill nor obtaining the same results as a skilled physician. This includes not only the saving of infants' and mothers' lives but also the better treatment of parturition accidents so that the mother may be put back upon her feet in as sound a condition as before confinement. The midwife should not be a fixture in this country, but something must be supplied to take her place. That something is an out-patient and home service provided by lying-in hospitals. The number of in-patients of the Providence Lying-in Hospital and those of Boston Lying-in Hospital are about equal; in the latter 2,799 patients made 7,488 visits to prenatal clinics and 1,255 patients were attended by confinement in their homes.

The Providence Lying-in Hospital has made a beginning. In 1920, 793 patients visited the prenatal clinics but none were attended in their homes. The hospital should take up this work. In the near future the hospital will probably be moved to more extensive and modern buildings and this would be the proper time to make a beginning.

The function of the prenatal clinic should not only be to examine all mothers who expect to enter the lying-in hospital (unless they are private patients), but also to examine before and after delivery as many mothers as properly should go to the clinic. Many of these mothers may be able to pay a delivery fee to a private practitioner and the clinic should turn over to that physician all its information. This includes a class who should have supervision during pregnancy and afterwards and who are not able to pay for it, although they may be able to pay for the delivery alone.

There is another class who are really poor and who cannot afford to pay the fee which physicians

charge and many such turn to the midwife. This is the class which the lying-in hospital should attend in their homes.

The out-patient service should be supplied by a house officer and under the district and pupil nurses' supervision. The interne should have this as part of his service after he has served in the "house." It is much better then, for his previous experience makes it possible for him to go into private homes with reasonable assurance that he will be able to meet all ordinary conditions and know when to call for help. The home supervision should be a joint service between the hospital and the District Nursing Association. The pupil nurses in training should also have this work as part of their course. The house officer who has had his "house" experience and a nurse should be called for every home confinement which properly belongs to the hospital. In this way life will be saved and much damage to mothers avoided, while physicians and nurses will be provided with excellent opportunity to gain experience in midwifery as it has to be carried out in the home.

DR. G. ALDER BLUMER.

It is the privilege of *THE JOURNAL* to extend to Dr. Blumer the congratulations and good wishes of the medical profession of Rhode Island. Congratulations, not on his retirement from a post which twenty-two years of fruitful work must have rendered dear to him, but rather on those very twenty-two years of accomplishment. When a man has traveled such a road, and when he decides to pass on the burden of the continuation of his work to others, it is well that he should feel the satisfaction that comes from the knowledge that his achievements are appreciated by his colleagues and his community.

The past twenty-two years during which Dr. Blumer has been Superintendent of the Butler Hospital have seen many and far-reaching changes in the care of the mentally unfit. It is pleasant to reflect that Dr. Blumer himself has had such a large part in the working out of these advances. In no field can intelligent and altruistic humanitarianism better be displayed. Dr. Blumer was among the first to grasp and develop the modern conception of the care of the insane and it must be admitted that no better example of the

practical application of these ideas can be found, than the work in his wards at the Butler Hospital. Twenty-two years ago last September Dr. Blumer left the Utica State Hospital, where he had served as assistant superintendent and superintendent after leaving the German Hospital, Philadelphia, in 1886. His undergraduate medical training he received at the University of Pennsylvania and his scholastic and collegiate work in his native country, England, as well as in France and Germany. The broad intellectual culture that he has achieved, that precious combination of science and the humanities, so rare among medical men and at the same time so valuable in all professional life and, above all, in the field of psychiatry, bears eloquent testimony to a life of study.

General acknowledgment of his attainments has been accorded him not only in the form of honorary university degrees but also in the opportunity to serve on occasions as psychiatrist under conditions of country-wide publicity. While extending to Dr. Blumer our best wishes for the future, we wish, turning to the past, to congratulate not only the doctor himself but also the hospital where he has labored and the city and state to which he has been an ornament.

PROBLEMS OF PUBLICATION BY AN EX-EDITOR.

To paraphrase "The Pirates of Penzance," the editor's lot is not a happy one. On him rests the responsibility of collecting a copy for each issue and for all the various processes of editing and proofreading until the copy has gone to the printer for publication. The editor of a medical journal has no paid assistants or reporters who are required to furnish material or else lose their jobs. He must rely upon the good will of his confreres to hand in promptly papers read before medical societies. These original articles are absolutely necessary to the conduct of the *Journal*. They form the essential ground work of each issue and the editorials, reports of societies and miscellany are only incidental items not absolutely essential to publication.

We feel that there is a definite need for the RHODE ISLAND MEDICAL JOURNAL in this State. It fills a place not covered by any other medical journal, and during the war, when publication was

necessarily suspended, the lack of it was plainly apparent.

Oftentimes when the editor presses his request for some article which has been read before a society and has not been handed in to the Secretary, he is made to feel that his request is an unjust one. Far from it. The By-Laws of our societies clearly state that papers read before them are the property of the society and are to be published in the transactions. The transactions in this State are, at the present time, published in the RHODE ISLAND MEDICAL JOURNAL. The same argument for promptness holds good with the associate editors who furnish articles, editorials, and new items which provide material for each issue. It is an easy matter to forget to hand in a copy for a definite date, but the failure to do so throws an extra burden upon the editor.

No one can appreciate the petty annoyances which help to make the editor's life an unhappy one unless he has himself held the position. We should all give our hearty support to the editor and coöperate with him in his thankless task. It is a modest request which he makes of us, and one which we may all carry out with no great burden to our brains or pens. If the RHODE ISLAND MEDICAL JOURNAL is worth supporting at all, it is worth supporting well.

CASE REPORT

REPORT OF A CASE OF TRAUMATIC RUPTURE OF URINARY BLADDER.

BY ARTHUR T. JONES, M. D., F. A. C. S.,
Providence, R. I.

The patient, Ethel C., aged fifteen years, white, was brought into the Memorial Hospital, October 13, 1921, having been run over by an automobile.

Upon admission patient is in extreme shock; abdomen tympanitic and tender throughout, especially over pubes; area of dullness over bladder. Abrasions of skin over lower abdomen. No other external evidences of injury. The patient was put to bed to await recovery from extreme shock. A catheterized specimen showed apparently clear blood. Pulse was 130. Diagnosis: Ruptured Bladder. After about four hours patient had sufficiently rallied from shock so that operation was done. Abdomen was opened, no blood found in peritoneal cavity; no evidence of rupture of vis-

cera, or of fundus or posterior wall of bladder. There was much extravasation of blood into tissues on either side and in front of bladder and an active hemorrhage taking place beneath pubic arch in front of the bladder.

The abdominal peritoneum was closed and bladder opened extra-peritoneally. This revealed a laceration of the anterior bladder wall two inches in length and through which the fracture of the pubes and the separation of the bones could be felt. On the left side of the bladder was another laceration two and one-half inches long extending from base of bladder straight up the left wall. The anterior rent was sutured with Chromic gut. The patient's general condition was so poor at this time that she required stimulation and it was necessary to save all time possible. As no active bleeding was taking place from the tear in the lateral wall and as the edges came into good apposition, it was decided to establish drainage, control the hemorrhage, which was coming from the front of the bladder beneath the pubic arch with packings of gauze and to get the patient off the table as soon as possible. A self-retaining catheter was purse-stringed into the bladder through the abdominal incision, the hemorrhage beneath pubes controlled with gauze packing and incision closed down to the catheter and packing.

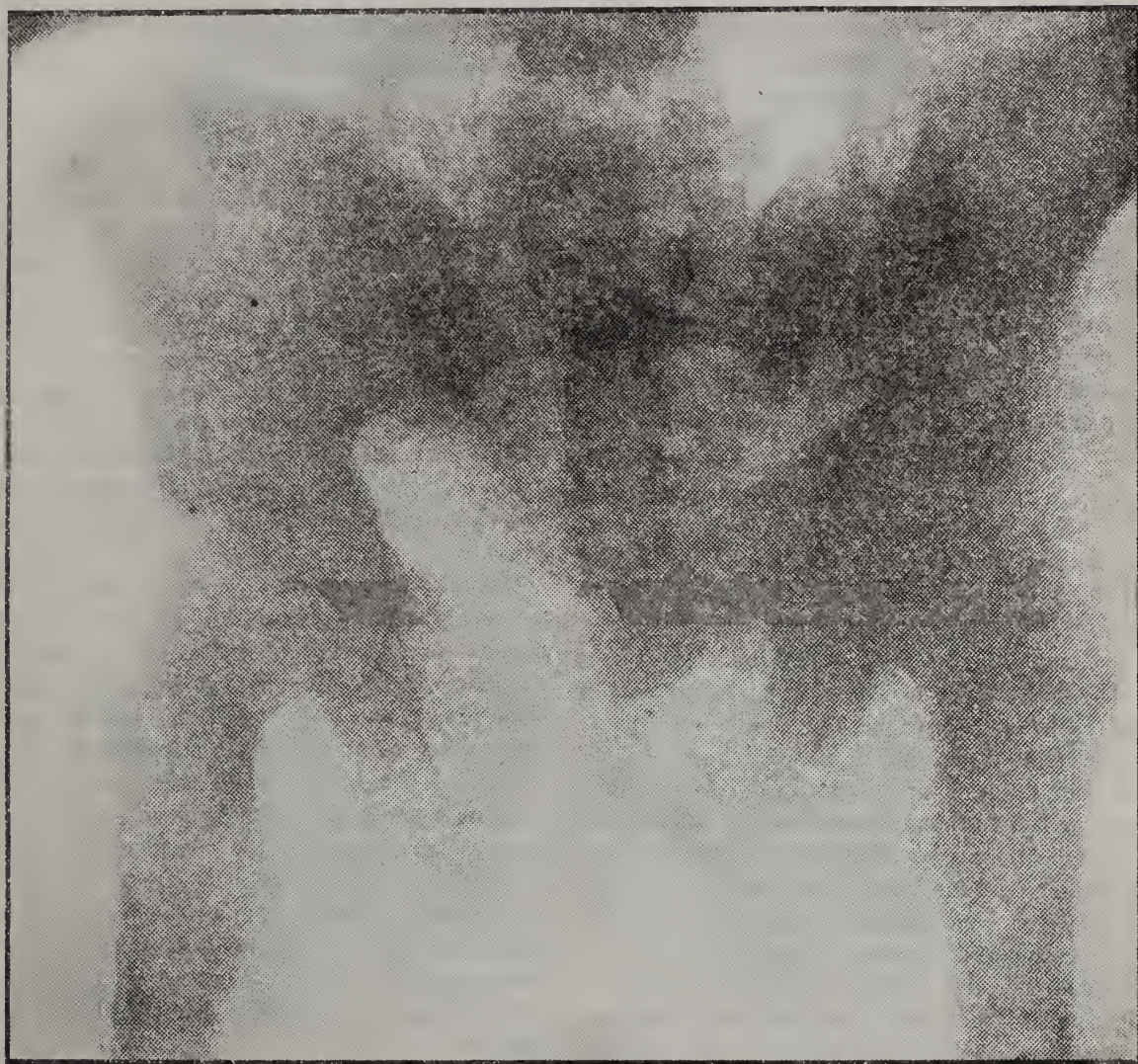
An X-ray of the pelvis shows a complete fracture of the horizontal portion of the left pubic bone; a fracture of ramus of the ischium and a fracture of the ilium straight down to the great sacrosciatic foramin.

The patient's condition was very poor when she left the table.

The following day, although general condition was poor, pulse weak, she gradually rallied. Drainage through the catheter, which was at first apparently clear blood, in twenty-four hours was showing very little blood and good amount of urine drainage. Forty-eight hours after operation patient was restless; sleeping in naps. On October 19 (thirty-seven days following operation), patient had shown steady improvement; drainage of urine through catheter. Gauze packing in the pre-vesical space was removed.

Patient has continued to make an uneventful recovery.

On November 6 soft catheter was passed into bladder through urethra. On November 9 patient



Fractured Pelvis with Rupture of Bladder
Ethel C.
Fracture Left Pubes, Ischium and Ilium

was voiding voluntarily. No leakage of bladder, the catheter having been removed on the twenty-first day. Patient was walking December 8 (fifty-six days following injury) without difficulty or pain and is to leave the hospital within a few days.

The interesting features of this case and the points which, in my opinion, tended particularly toward her recovery were:

Waiting a few hours until patient was over the primary shock; rapid operation; in fact, not spending time to suture one of the bladder tears, on account of extremely poor condition on the operation table; establishing constant drainage through self-retaining catheter and quickly controlling hemorrhage from the front of bladder with gauze packing; leaving the fractured pelvis severely alone, as any attempt at manipulation or to better position of bony structures would have accomplished very little at the time and tend to further damage of the soft structures.

SOCIETY MEETINGS

RHODE ISLAND MEDICAL SOCIETY.

The regular quarterly meeting of the Rhode Island Medical Society was held December 1, 1921, in the Medical Library building at 4 P. M. Dr. George S. Mathews, president, in the chair.

The minutes of the September meeting and of the November meeting of the Council and House of Delegates were read by the secretary.

Under the head of new business, the president appointed the following members as delegates to the medical societies of the New England states as follows: Maine, Dr. A. T. Jones, Dr. D. L. Richardson; New Hampshire, Dr. J. E. Donley, Dr. George W. Gardner; Vermont, Dr. L. C. Kingman, Dr. H. A. Cooke; Massachusetts, Dr. Charles A. McDonald, Dr. Charles F. Deacon; Connecticut, Dr. E. S. Brackett, Dr. D. F. Gray. He also appointed as member-at-large of the board of trustees of the Rhode Island Medical Library building, Dr. R. Morton Smith. He announced the anniversary chairman for the annual meeting and banquet to be Dr. J. E. Mowry.

The following program was presented: 1. A Study of Asthma, Dr. Jay Perkins, Providence. 2. Observations on Acute Appendicitis, Dr. Charles O. Cooke, Providence. 3. Diseases of the Thyroid and their Treatment, Dr. Frank H.

Lahey, Boston. 4. Surgery in Diabetics, Dr. George W. Gardner, Providence. 5. What Can Be Done for the Deaf of Rhode Island? Dr. F. T. Rogers, Providence.

Following the reading of the last paper, Miss Marion Durfee, a teacher of lip reading, explained briefly the aims and possibilities of this form of education for the hard of hearing. Dr. Rogers demonstrated by two of Miss Durfee's pupils the degree of education possible to the deaf by lip reading, after which he proposed the following resolution, which was adopted:

"Whereas, The Rhode Island Medical Society, recognizing the fact that many cases of increasing deafness are not susceptible of relief by remedial measures, and, whereas adults afflicted with deafness are handicapped in their efforts to secure a livelihood, and children prevented from acquiring the education to which they are entitled, and,

"Whereas, The measures for the amelioration and betterment of this unfortunate class are inadequate and not at all commensurate with the relief afforded the tubercular, the feeble-minded or the blind,

"Resolved, That the Rhode Island Medical Society affirm its interest in the welfare of the chronic deaf by the appointment of a committee of three who are to be named by the president of the Society, and such committee is requested to invite a representative of the Department of Public Schools, the Rhode Island School for the Deaf, a social worker and Miss Durfee, to form with them a committee for the consideration of this subject.

"Resolved, That this committee shall, if in their opinion it shall be advisable, have the power to inaugurate a Providence League for the Hard of Hearing, with the sanction of this Society, and that they shall report to the Society the result of their action."

The chair appointed as committee, Dr. F. T. Rogers, Dr. N. D. Harvey, Dr. F. N. Bigelow.

Dr. William R. White spoke on Dr. Storrs, our oldest member, who sent a message of good wishes to the Fellows of the Society.

Adjourned.

MEETING OF THE COUNCIL.

The regular meeting of the Council was held November 22, 1921, 4:30 P. M., at the Medical

Library, the president, Dr. George S. Mathews, in the chair.

The application for transfer of membership of Dr. Roy Blosser from the Georgia Medical Society to the Rhode Island Medical Society was presented by the secretary with proper credentials from the former Society, and it was so voted that he be elected a member of this Society. In the absence of the treasurer, the secretary presented the treasurer's budget as follows:

Budget—1922.

Secretary expense	\$ 75 00
Stenographer	30 00
Printing	75 00
Postage	50 00
Gas	60 00
Electricity	50 00
Fuel	500 00
Collations	500 00
Librarian	1,300 00
Books and Binding—including Ely Fund \$74 for Journals.....	150 00
Janitor	396 00
Insurance	15 00
Safe Deposit	60 00
City Water	15 00
Telephone	75 00
House Supplies	50 00
House Repairs	150 00
Rhode Island Medical Journal.....	400 00
	<hr/>
	\$3,897 00

It was moved and seconded that a committee of two be appointed by the chair, with power to increase, as they may see fit, the total insurance on the building up to \$30,000. An amendment was offered by Dr. Chase to the foregoing motion to permit the above committee to insure the contents of the building up to \$10,000. The amendment, duly seconded, was passed, after which the original motion was adopted, the chair appointing Drs. S. A. Welch and A. T. Jones as committee.

It was then moved and seconded that the budget be recommended to the House of Delegates for adoption. It was so voted.
Adjourned.

J. W. LEECH, *Secretary*.

MEETING OF THE HOUSE OF DELEGATES.

The regular meeting of the House of Delegates was held November 22, 1921, at 5 P. M. in the

Medical Library. The president, Dr. George S. Mathews, presided.

In view of the absence of the treasurer, Dr. W. A. Risk, for several months, the president called attention to the necessity of electing an acting treasurer. The name of the secretary, Dr. James W. Leech, was proposed as acting treasurer, seconded by Dr. F. N. Brown, and he was by vote declared acting treasurer until Dr. Risk returns. The treasurer's budget as recommended by the council was then adopted.

The following resolution, which was introduced at the September meeting of the Rhode Island Medical Society, was presented to the House of Delegates for definitive action:

"Resolved, That in the opinion of the Rhode Island Medical Society, it is apparent that sufficient funds have not been appropriated by the State Legislature for the medical care of the inmates of the State Hospital for Mental Diseases, and it is hereby urged upon the Legislature to make every effort to provide sufficient funds for the above purpose."

It was moved and seconded that the foregoing action be adopted. It was so voted.

Dr. Mowry moved that the secretary be instructed to forward a certified copy of the above resolution to each member of the finance committee of the House and Senate. Dr. A. T. Jones offered an amendment whereby the foregoing action should be forwarded to the newspapers for publication. This amendment was seconded and carried, after which the original motion was adopted. Dr. Brown, chairman of the committee on publication, tendered on behalf of Dr. Risk the latter's resignation from the committee on publication. It was moved that the resignation be accepted. Dr. B. H. Buxton, business manager, was elected a member of the committee on publication to take Dr. Risk's place.

Adjourned.

J. W. LEECH, M. D., *Secretary*.

WOONSOCKET DISTRICT MEDICAL SOCIETY.

Regular monthly meeting of Woonsocket District Medical Society was held Thursday, November 17, at the office of Dr. W. C. Rocheleau, Hamlet Avenue. Dr. Charles P. Whelan of Boston gave a very interesting talk on "X-Ray Diagnosis and Treatment," after which a luncheon was served.

The next meeting of the Society will be held December 15.

HOSPITALS

NEWPORT HOSPITAL.

At the November meeting of the staff of the Newport Hospital after the reports of the departments were made, Dr. William A. Sherman of the surgical staff read a paper on Cæsarian section which was discussed by Drs. Stewart and Sullivan from the standpoint of operation and the indications.

At the December meeting of the staff of the Newport Hospital, the following officers were elected for the year of 1922: President, Dr. William A. Sherman; Vice-President, Dr. Edward V. Murphy; Secretary, Dr. Norman M. MacLeod; Librarian, Dr. D. P. A. Jacob.

PROVIDENCE CITY HOSPITAL.

On January 1, 1922, Dr. Arthur R. Newsam and Dr. Earl R. White finished services as internes. Dr. White is to begin private practice and Dr. Newsam to become house officer at the Children's Hospital, Boston. On the same date Dr. B. H. Davison and Dr. C. W. Fulbright began a six months' service as house officers.

Dr. Parker Mills, second assistant superintendent, has resigned to begin private practice in January, specializing in genito-urinary diseases. Dr. Mills has been assistant superintendent since April, 1918.

Dr. William Holt, now third assistant superintendent, will be promoted to the vacancy created by the resignation of Dr. Mills.

Contagious diseases continue to be very light. There are some diphtheria patients, a very few scarlet fever patients and no measles. There has never been so few patients suffering from these diseases under treatment at this time of year since the hospital was opened.

The regular monthly meeting of the Staff Association was held at the hospital on December 21st.

RHODE ISLAND HOSPITAL.

The annual meeting of the Staff Association was held at the Hospital Monday, December 12th, at 12 o'clock noon. Routine business was transacted, including the election of officers and selecting services.

Dr. James F. Boyd, now identified with X-ray Department, will open offices January 1, 1922, at 116 Waterman Street, for private practice, limited to X-ray work and radium therapy.

ST. JOSEPH'S HOSPITAL.

A meeting of the staff of St. Joseph's Hospital, at which election of officers was held at the outpatient building, Plenty Street, on December 9, 1921, at 9 P. M. The nominations for officers of the staff for the ensuing year were: President, Dr. John B. McKenna, and for Secretary, Dr. George F. Johnson.

The American Society for the Control of Cancer has asked St. Joseph's Hospital to co-operate with it in its effort at education. To this end a clinic is desired.

The executive committee of the staff, therefore asks that each member of the staff submit an outline report of the cases under his care or observation, treated or untreated, operable or inoperable, unoperated or recurrent, for review and selection, that it may be determined whether sufficient material is available for an instructive clinic.

GEORGE F. JOHNSON, *Secretary*.

MISCELLANEOUS

QUESTIONNAIRE ON ALCOHOL AS A THERAPEUTIC AGENT.

Various statements have been made as to the views of the medical profession on the therapeutic value of alcohol, whether whisky, beer or wine. The profession is quoted both as being in favor of and opposed to its use. So far as we know, no attempt has been made to ascertain the opinions of any considerable number of physicians on this question. In order to secure the views of a representative cross-section of the medical profession, a referendum is being taken this week. The questionnaire* has been carefully prepared, so that each physician can express his opinion on the important points in connection with the whole proposition. It is sent to forty thousand physicians—every other name on our mailing list. This list includes Fellows of the Association, members of the organization, and non-members. In addition, it is sent to ten thousand physicians who are neither members of the organization nor subscribers to THE JOURNAL, selected in a similar manner from the A. M. A. Directory. These lists

cover the whole country. A study of the questions will show that they are not leading and cannot influence in any way the opinion of the physician who replies. This referendum is of the utmost importance, and it is sincerely hoped that every physician who receives the questionnaire will immediately give it his careful consideration. It is the duty of every physician who receives this questionnaire to express his opinion.—*Jour. A. M. A.*, December 3, 1921.

*QUESTIONNAIRE ON ALCOHOL AS A THERAPEUTIC AGENT.

1. In what line of practice are you engaged? General practice?..... Specialty?.....
(State Specialty)
2. (a) Do you regard whisky as a necessary therapeutic agent in the practice of medicine? Yes [] No []
[By "whisky" is meant distilled liquors, whether whisky, brandy, gin, or rum.]
(b) If "yes," in what diseases or conditions do you regard whisky as necessary?
3. (a) Do you regard beer as a necessary therapeutic agent in the practice of medicine? Yes [] No []
[By "beer" is meant beer with the same alcoholic content as prevailed before prohibition went into effect, also ale, stout, porter, etc.]
(b) If "yes," in what diseases or conditions do you regard beer as necessary?
4. (a) Do you regard wine as a necessary therapeutic agent in the practice of medicine? Yes [] No []
(b) If "yes," in what diseases or conditions do you regard wine as necessary?
5. (a) Have instances occurred in your own practice in which unnecessary suffering or death has resulted from the enforcement of prohibition laws? Yes [] No []
(b) If "yes," how many such cases have you known in the last year?.....
6. How many times have you found it advisable to prescribe these liquors in a month?
Whisky..... Beer..... Wine.....
7. Is the prescribing of alcoholic liquors forbidden by your state law? Yes [] No []
If "no," do you hold a federal permit? Yes [] No []

8. (a) The present regulations limit the number of prescriptions to 100 in three months. In your opinion, should there be any limit to the number of prescriptions for alcoholic liquors a physician may write? Yes [] No []
(b) If "yes," what should the limit be?
9. (a) In your opinion, should physicians be restricted in prescribing whisky, beer and wine? Yes [] No []
(b) If "yes," what restrictions should be made?

.....M. D.

.....(Postoffice Address) (State)

Please sign your reply, not for publication, but in order that we may know that it was filled out by a qualified physician. If you do not care to answer the questions, kindly return this questionnaire, with or without your signature. Return to American Medical Association, 535 N. Dearborn St., Chicago, Ill.

[FOOT NOTE.—There have appeared in public print at divers times so many misleading and often false statements attributed to the medical profession, individually and collectively, as to their attitude toward the use of alcohol, that it has become the duty of all physicians to reply to this questionnaire, if for no other reason than that the authenticity of statistics shall be beyond quibble. If necessary, the above may be clipped out and returned (as per direction thereon) in lieu of the larger form. Make your X within the bracket.—Ed.]

ANNOUNCEMENTS

NATIONAL BOARD OF MEDICAL EXAMINERS.

1310 Medical Arts Building, Philadelphia.

December 8, 1921.

The first examination of the National Board, under the new plan, in Parts I and II, will be held as follows:

Part I, February 15, 16 and 17, 1922, inclusive.

Part II, February 20 and 21, 1922, inclusive.

Applications for examination should be received no later than January 15, 1922. Application blanks and circulars of information may be had by writing to the secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

FISK FUND ESSAY.

Annual meeting of the trustees was held in June. Several essays offered. There was no

award. Subject for 1921-1922, "Radium Therapy."

ETHER AND LAVENDER

JUST ROCKS.

An Off-Side, Non-Medical "Pome," Dedicated in Deep Sympathy to Those Who Know.

With face awry and saddened eye
And long and cold his days,—
There is no cheer, but a look of fear
In the face that quite dismays.
As he wanders by, we ask him why
The "Iron is in his soul."
He answers terse; yea, with a curse.
" 'Tis the Rocks they sell for Coal."

(And then he waxes wroth)
"They dumped in my empty bin,
And this advice I got:
'It's hard to beat this stuff for heat,
If you only keep it hot.'
And there you be, By Gum!" sezhe
"That money's good as stole
For it's buried deep in that great heap
Of Rocks they sell for Coal."

"Tho' we may rage at the miner's wage
That can't be all the cause,
The men that sell should be in—cell
But they seem above the laws.
Think of the price and the mighty slice
It takes from a feller's roll;
I'd not bewail if they stayed in jail
With the rocks they sell for Coal."

—Umbcr.

ABSTRACTS

ENDOCRINOLOGY.

The mere fact that hundreds of physicians and thousands of patients have testified to having profited by the use of this or that endocrine preparation, R. G. HOSKINS, Columbus, Ohio (*Journal A. M. A.*, November 5, 1921) says, carries no conviction of its actual value to one who reflects that the pharmacopeias are filled with useless medicaments of which the same can be said. Reports of cures are convincing only when accompanied by adequate evidence that suggestion and

other accessory therapeutic measures, as well as mere coincidence, have been ruled out as the determining factors. So long as practitioners fail to realize the essential requirements of scientific evidence and to educate their patients along this line, not only pseudo-endocrinology but also a multitude of other pseudoscientific cults will continue to flourish. The outstanding fact is that endocrine physiology is largely in a state of uncertainty, whereas the facile applied endocrinology with which we are so unfortunately familiar assumes a large body of substantiated fact. Deductive reasoning, which is the mainstay of a considerable class of self-styled practical endocrinologists, can be productive only when the premises are sound. However probable the existence of numerous circulating hormones, proof of their existence is almost completely lacking. The existence of hormonal antagonism remains yet to be proved, however fascinating it is to theorize about. A fantastic theory that has had some currency is that the body cells have a capacity to select from a pluriglandular mixture any hormones they happen to need and to discard the rest. All the evidence is to the contrary. Both clinically and experimentally it is sufficiently plain that the law of mass action has not yet been repealed. To deduce from the unfortunate existing situation, however, the conclusion, which certain shallow observers seem to have drawn, that the field of endocrinology itself is merely a mirage, is quite as crass a mistake as to accept as substance every flattering prospect the eye discerns. Endocrinology is one of the most difficult fields of biology. The problems presented are fundamental and quite as fascinating as can be found in any field. There is no easy road in endocrinology, either to discovery or to knowledge already gleaned. There are many problems demanding solution, which require, not genius, but merely accuracy and patience together with recognition of the ordinary criteria of evidence in any field. What is needed is more work, carefully planned and carried out, less shallow theorizing on the part of those dabbling with the problems, and the consistent but discriminating support of the medical profession.—*Abstract from the J. A. M. A.*

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ORIGINAL ARTICLES

A STUDY OF ASTHMA.*

BY DR. JAY PERKINS,
Providence, R. I.

When I was a boy, mother used to give as causes of various ills that occurred to her children the things we did which she did not want us to do and we, in turn, accredited them to things which we had to do against our desires. In giving the causes of asthma has not something of the same system been followed? The physician has had some idea come to him as the cause and tried to make the cases conform to this idea. In this study of the condition called asthma the intention is to present some facts rather than to draw conclusions. The symptom complex frequently mentioned as cardiac or renal asthma are not considered in this paper, as they are more properly classified as dyspnea associated with these diseases than as functional disturbances. In the first place a differentiation must be made between the fundamental conditions leading to asthma and the excitants of the attacks. Of the latter there are many. The patients themselves say that attacks are caused by "taking cold," hay fever, eating certain foods, changes in the weather, exposure and various other causes. Physicians, being a little more exact, say that asthma is caused by proteids such as certain foods, pollens, horse dandruff, emanations from cats, dogs, feathers, et cetera. Also excitement, overexertion, climatic changes, exposure and psychoses may bring on attacks.

A more scientific research has shown that these usually act through the vegetative nervous system. The vegetative nervous system acts without our will and is beyond our voluntary control and is subdivided into the sympathetic and parasympathetic. These subdivisions act in opposition to each other or each is supposed to control over-activity of the other. Normally this control is maintained and the functions of the body are maintained properly but sometimes the proper balance is not maintained and disturbances result. One of

these disturbances is called asthma. Hay fever, vaso motor rhinitis, urticaria, eczema, angioneurotic oedema, tachycardia, a susceptibility to bronchitis and various abnormal phenomena especially of the nervous system as insomnia, dreaming, eructations of gas, et cetera, at times have the same origin.

In the practice of medicine the physician is very familiar with the fallacy of making a part equal to the whole. As illustration, we have special systems of medicine and even more marked is the setting up, by legislation even, of such small sections as osteopathy, Christian Science, et cetera, as each being equal to the whole system of medicine.

In most of the writings on asthma there is this same tendency to make a part equal to the whole and ascribe one or more of these excitants as the cause or causes of asthma. Especially is this true in reference to the proteins. The work done in investigating protein sensitization and in treating asthma by withdrawing certain proteins or by immunization against them has been most interesting and valuable and has apparently so fascinated some of its advocates that they have failed to look below the surface. That attacks are brought on by certain proteins has been more than abundantly demonstrated and great relief is obtained in many instances by treating the cases accordingly.

Sometimes, however, a patient is sensitive to many proteins, as indicated by the skin tests, at times when none of these is acting, and frequently attacks of asthma come and go while the use of the proteins to which they are sensitive continues regularly.

Also a patient may be sensitive to several or many proteins and yet the attacks follow other excitants, as changes in the weather, overexertion or excitement. A study of a disease showing such a multiplicity of excitants certainly leads to the conclusion that there is some basal condition back of these excitants which is the cause of the susceptibility to these various things.

About six years ago this study was begun, using the thyroid gland as a possible causative origin of the disease. No tests for thyroid activity were then available except the clinical history and use of

*Read before R. I. Medical Society, December 1, 1921.

the thyroid extract. Some excellent results were obtained but all cases were not reached. Enough was learned, however, to add dysfunctioning of the thyroid to the list of excitants. Cases of hypothyroidism were comparatively easily handled, though there was no test excepting the clinical by which to gauge the dosage and there was a tendency to leave off the treatment when the attacks ceased. Hyperthyroidism as indicated by susceptibility to small doses of thyroid extract was harder to handle but was found to respond fairly well to treatment directed to the nerve instability always found in these cases.

We now have a test, basal metabolism, which is of value in testing thyroid activity and for the past year I have been using this with all patients having asthma or the nerve symptoms which are associated with asthma even though no asthma was present.

Last June in a paper before the American Climatological and Clinical Association on "Thyroid Dysfunctioning with Special Reference to Asthma," I showed that frequently these cases of nerve instability alone or associated with cardiac or pulmonary disturbances have an increased basal metabolism and this is especially true of asthma. When treated upon this basis these cases can be cured if the disease is not of too long standing and the treatment is not too soon given up.

The endocrine glands are interdependent and one of them cannot markedly dysfunction without others being forced out of normal functioning also and if marked functional disturbances exist long enough organic changes result which are not rectified by removing the cause. Some injury is left behind depending upon the duration and severity of the cause. In children, or older persons if the cause has not brought about secondary irreparable changes, when the original cause is overcome nature will readjust the other functions so that we may have all the functions running normally. The functions of the endocrine glands are very variable in the intensity of their action and the causes of this variability are but little known. We simply know some of the manifestations. But little is known, and that empirically, as to what stimulates or depresses their functioning. In treating their dysfunctioning there are three methods; first, to find and remove the cause or causes of dysfunctioning, second, to treat the glands directly, taking

the thyroid as an example, to supply thyroid extract in case of hypothyroidism or to remove the gland or treat it with X-ray if we have hyperthyroidism, and, third, to treat the effects of the abnormal action.

Nature is sufficiently indulgent during the repair period of life to renew normal functioning in these cases if given half a chance. Some cases of asthma, as we all know, recover spontaneously. What corrected the dysfunctioning a careful study of these cases if conducted at the time could probably show, but such study is impossible and our only knowledge from them is that asthma is not incurable. Removing or producing an immunity to the exciting causes may be all that is necessary. Lessening or overcoming the effects may help in recovery by lessening nature's work in restoring normal equilibrium. This is shown by cures following removal from exciting surroundings, in cases where mental or physical excitement is an exciting cause of attacks, change to an equable climate when climatic changes excite attacks, removal from or vaccination against protein excitants when the particular ones at fault can be determined. All cases are not thus simple, however, and cure by this means is very frequently impossible, though these are the usual measures adopted when an effort is made to cure. The most brilliant results are obtained when we can find the thyroid as the responsible organ and by giving thyroid extract or so treating the gland as to diminish its activity overcome the trouble at its central point. The number of cases in which this can be accomplished, however, is not large so far as we can tell with a certainty. It is apparent that the endocrine glands are variable in their activity, interdependent and to some extent interchangeable and we have no exact measure of the activity of any of them. Basal metabolism is to some degree a measure of the activity of the thyroid but this frequently materially varies in the same individual on different days and there is no way of telling whether this variability is due to changes in the gland or to some other causes. While in many cases basal metabolism is of great value and a positively deciding element when confirmatory of clinical data, for the present at least we can in general give it no higher deciding value than in other cases we give to the X-ray or blood pressure readings. And where the functioning is so variable I do not consider our knowledge of ultimate

results sufficiently definite to make safe any measures which may destroy the power of the thyroid gland to act because at present the gland apparently functions normally part of the time and if any of it were destroyed then would it not be below par part of the time and put us in the position of "robbing Peter to pay Paul"? Whether the X-ray has this effect is not yet positively determined, but the claim is made by some that it does. In these cases of unstable activity, therefore, it may be that the best method for handling them is to remove so far as possible the exciting causes and at the same time increase the resisting power of the patient by at the same time treating the activity of the glands by diminishing the stimulation of the glands through the vegetative nervous system. This is a longer process than the preceding, but if persevered in can effect a cure in a great many cases and especially in children.

That which is true of the thyroid is unquestionably true of the other endocrine glands so far as disturbing the stability of the vegetative nervous system is concerned. Unfortunately, ability to place the responsibility upon the proper gland is often lacking and until we have more accurate knowledge of the individual endocrine glands we must consider that instability of the nervous system such as produces asthma may be caused by any of the glands. As illustrations:

Case 5082, female, age 17, school, first seen by me December 10, 1920. Asthma 4 or 5 years, growing worse and attacks more often. Sensitive to milk, ham sandwiches, eggs, chocolates and onions. Also sensitive to smoke of tobacco or anything frying. Has cold hands and feet. Eczema on face and neck with attacks. Palpitation, but only with attacks of asthma. Menses began at 12 years, irregular, every 2 or 3 months and scant. Underdeveloped. Two tests of basal metabolism taken while she was feeling poorly gave plus 25% and plus 30%. Thyroid palpable and hard. Seven months later she was practically free from attacks and was eating chocolate, ham and eggs. She said she had not dared to try milk because that had produced such severe attacks.

Case 5055, female, age 20, speeder tender, first seen November 20, 1920, paternal grandfather had asthma, patient had eczema when a baby, rarely now, has had asthma for one year, had influenza 3 or 4 months before first attack, has to be up with asthmatic attacks from 2 to 4 or 5 A. M.

about three nights a week; has hay fever. Asthma follows exposure to dust, steam, excitement, over-exertion and rainstorms. Examination; pulse 100, temperature 99.6, B. P. 125/85, wheezing rales over both lungs, no emphysema, expansion poor. Both lobes of thyroid enlarged, right lobe the larger. Under medical treatment she improved but attacks still continued. February 6, 1921, pulse was 88, temperature 98.9 and basal metabolism was plus 28%. She was then given X-ray treatments by Dr. Frank E. Peckham. She has steadily improved since. July 29 basal metabolism was plus 17%, pulse 90, temperature 98.6. October 10th she stated that since July she had three attacks of asthma, only one of which was of any severity and that followed excitement occasioned by her mother being suddenly taken ill. With this attack she had an "eruption" on the face lasting two weeks, no medicine for some weeks. November 5th some asthma one night since last visit. Face cleared. Examination of lungs negative, pulse 94, temperature 98.6. No hay fever this year. She is not yet completely well but reluctance to push the X-ray treatment is responsible for letting assisted nature have a further chance to complete the cure.

The best results are obtained with children.

Case 4754, female, age 6 years. There is a very marked family history; on mother's side of family great-great-grandfather had bronchitis for 40 years, great-grandmother was extremely neurotic, grandmother extremely nervous, neuralgic headaches all her life, had hypertrophy of the heart, had bronchial cough easily, constantly before her death, aged 60 years. Her grandfather had nervous breakdown when 31 years old; still living. One uncle and two aunts have had neuritis. Two aunts have bronchial colds frequently. One wheezes in damp weather. One uncle and one aunt have excruciating headaches. Another aunt is extremely nervous and was thought to have chorea coming on at 16, so that she had to give up college and at about the same time was thought to have tuberculosis, is living, and has frequent attacks of laryngitis, but no bronchial trouble. Another aunt stopped menstruating at 27. Her mother is of a very nervous temperament and has a basal metabolism of plus 30%. Her father has hay fever badly and has been taking the vaccine treatment for it for several years. There are a number of cases of asthma, hay fever and other

nerve disturbances in father's family. The patient had eczema badly when one year old for several months, and at times a little since then. She sobs and cries in dreams, wakening filled with terror. She has always had wheezing in damp weather, and frequent attacks of asthma and gets broncho-pneumonia with severe attacks. She came under my care for regular treatment in April, 1920. During the spring under treatment she improved very much. In the latter part of the summer she was in Pennsylvania. I saw her again October 13th. She had then had some wheezing since the middle of August. She then had an attack of sneezing, running from the nose, also acetone in the urine, with vomiting. She had at this time wheezing rales in the chest, was crying and sobbing easily. She had broncho-pneumonia in November. She recovered from this, and on December 17th again began sneezing, temperature 100 and rales over the whole chest. This promptly cleared up and for some reason the treatment was stopped and in two weeks she again began sneezing in the night, had some eczema, and would become excited and hysterical on playing with other children. She was again put onto full treatment, and for the most part has remained in good condition now for 11 months and for 8 months has had no wheezing, and has been perfectly well with one exception and that was a slight attack on returning to the city in September. Her mother states that this is the first year that she has not wheezed whenever there were three damp days in succession.

All cases do not come under our present knowledge of the endocrine glands. Whether this is because of our incomplete knowledge of those glands or because they do not belong in this category remains to be demonstrated. Among the cases not positively classified are those apparently due to the psychoses. I have seen three marked cases who have had typical asthmatic attacks for many years who also have attacks of extreme severity when examination of the lungs is negative.

Case 5224, female, age 54, married. All of father's family had hay fever, bronchitis or asthma. Patient had croup until 12 years of age. As a child cried easily and was very bashful. Menses began at 15, scanty and irregular, stopped at 34. Polypi removed from nose at 28 years. Began to have asthma at 30 years. Nose again

operated on at 39 years. Has had no taste or smell since. About 8 years ago she began to expectorate casts of the bronchial tubes. Rarely any at present. First seen by me November 8, 1920. Had rarely been free from asthma for 10 years. Beginning 5 years ago and continuing for two years she was given vaccine treatment. At first stock vaccines were used and then she went to a physician in Boston who made a vaccine, but none of them did her any good. She gives a history of various vaso-motor disturbances. Sometimes after coughing hard and the day before I saw her, after passing urine, she has had spells of stiffening and pounding in the small of the back. At these times the heart pounds badly. She states that milk always made her cough. No history could be obtained of any more definite protein reaction. Examination; bronchial rales over whole lung area with prolonged expiration, some dullness, diminished breath sounds at right base, temperature normal, pulse 76, blood pressure systolic varied from 155 to 170, diastolic 100, urine negative. She was tested with thyroid extract, varium and pituitrin. No relief was obtained and apparently they affected her unfavorably. I say apparently for reasons which will appear later. Under treatment directed to control of the sympathetic nervous system she improved to a certain extent but not satisfactorily. In January an effort was made to test her basal metabolism but she could not stand the restraint of the mouthpiece, even without the attachment being made to the apparatus. Treatment directed to the sympathetic nervous system and also small doses of iodine and calcium were continued until in March she was much improved and her husband stated that for the first time in years he did not hear her wheezing and moaning in the night while she was asleep. On March 4th her basal metabolism was obtained with perfect ease and was plus 6%. At times her heart was rapid and rather weak and she was given on one of these occasions a tablet containing tincture of digitalis M. III. and tincture of strophanthin M. II. This was followed by spasmodic contractions of the abdominal muscles, her color became brownish and she was very much distressed. This was stopped, but on the next visit she was told what the tablet contained and that it could not possibly harm her. She was then able to take it without any difficulty. About 13 years ago while she was visiting a friend she looked through a

closed window across the street through another closed window and saw dust being raised by sweeping. Her hand immediately grasped her nose, she sneezed and had all the sensations of inhaling dust. During the spring her asthma all disappeared, she was sleeping and eating well and taking quite long automobile rides, until one day they took another person who is always irritating to her, and following this ride the attacks came back badly and lasted all summer. She recovered again from the attacks and was in good condition until about two weeks ago, when, following an irritating incident, the attacks returned. Sometimes with marked difficulty of breathing, the air is found entering and leaving the lungs perfectly freely and no rales are present in the chest.

Here is a case in which the history would indicate a possible endocrine origin but in which apparently the original abnormality has been corrected and now the controlling factor is a psychic element.

No important function of the body can go wrong for a number of years without other functions also being affected and if the disturbance exists long enough, even though the original cause is removed, the other functions which have been made abnormal will to some extent at least so continue. In many of the cases of asthma which have existed for many years the original cause has probably disappeared as all of the glands atrophy with increasing age, yet the person is not well and never will be absolutely normal because of the abnormal habits already formed by various functioning organs of the body.

This study does not offer any cure-all for asthma, much as this is desired, but it does show that there is some underlying cause of asthma and the associated conditions, which is the reason why the proteins, overexertion, excitement, et cetera, produce these phenomena and that in many cases treating asthma on the basis that the endocrine glands furnish the cause we get excellent results.

DISCUSSION.

Dr. A. H. Ruggles, in discussing Dr. Perkins' paper: "We all know something about asthma. Dr. Perkins has gone into the causes and has also suggested the need of a more fundamental knowledge of the causes of asthma. I believe further investigation along the line of vegetative nervous system would be extremely valuable. A good many of our ills may be laid to this cause and I think many of us find the difficulty in our treatment of the vegetative nervous system. It has not been easy to treat the nervous system. The same is true of the endocrine system. With the exception of the thyroid, the other glands are

pretty indefinite in their influence on the body functions.

"We have agreed that certain individuals are subject to certain distressing symptoms and are troubled by these conditions. There must be something back of the actual irritation; some part of our organism that is disturbed and of this we have a great deal of evidence.

"Kirschmann has pointed out the relationship between the endocrine glands and asthma in a certain number of cases, but Dr. Perkins has pointed out several methods of approach. . . .

"It may help us in our understanding of the cases and so help us in our treatment and control of asthma to point out the more fundamental difficulty and that fundamental difficulty may well be the endocrine glands."

PRURITUS.

ROY BLOSSER, M. D.,
PROVIDENCE, R. I.

Pruritus is a symptom which occurs in many different skin diseases, but it also occurs independently of skin lesions. In some cases it is a symptom of an internal disease; in others we are not able to find any definite cause for it. It is with the two latter types of cases that this paper is concerned.

NEURODERMATOSES.

Brocq and other French dermatologists first called our attention to the fact that certain skin affections begin as pruritus, and the changes in the skin which occur later result entirely from the irritation and trauma due to continued rubbing and scratching. This condition has been given the name neurodermitis.¹ After the pruritus has existed for a variable length of time the skin becomes rough and thickened with well defined, cross lines or grooves (lichenification).

In the circumscribed form of neurodermitis the involved areas are rather sharply defined. It is most apt to occur on the back or sides of the neck, axillae, ante-cubital and popliteal spaces; on the palms of the hands and soles of the feet thick, horny patches of skin are sometimes formed and there may be deep, painful fissures.

In the diffuse type of the disease large areas are involved and the changes in the skin are more wide spread and less intense. The areas of predilection are the arms, legs, abdomen and sides of the chest. Sometimes almost the whole body is affected.

GENERALIZED PRURITUS.

A comparatively mild form of pruritus, more or less generalized, occurs in old people and is termed senile pruritus. Another form occurs only during the winter—pruritus hiemalis or winter

itch—and is usually most severe on the lower extremities. These types of the disease seldom produce marked secondary changes in the skin.

Pruritus of varying extent and severity occurs in a number of organic and constitutional diseases such as Hodgkin's disease, leucaemia, diabetes, nephritis, rheumatism, diseases of the liver and jaundice, and organic and functional diseases of the nervous system. In some cases the pruritus exists some time before the etiologic disease can be diagnosed. The writer recently saw a case of Hodgkin's disease in which the pruritus in a severe form had preceded by several months the enlargement of the lymphatic glands.

FACIAL PRURITUS.

Pruritus of the face may occur as a part of a generalized pruritus but in some cases the face alone is involved. It may begin in the eye-brows or at the sides of the nose and later extend to the forehead and cheeks. In a case seen recently it was especially severe in the eyelids and eye-brows and most of the hair of the eyebrows had been destroyed by scratching.

PRURITUS OF THE GENITAL REGION.

Anal and vulval pruritus, when severe, are apt to seriously affect the general health of the patient. They may occur in any of the constitutional diseases which produce generalized pruritus and they may also result from certain local affections. Pruritus ani may be due to any cause which produces irritation and congestion of the rectum such as constipation, especially an incomplete emptying of the sigmoid flexure and rectum, colitis, proctitis, fissures and other diseases of the rectum. Pruritus vulvae may be produced by irritating discharges from the vagina.

In both pruritus ani and vulvae, if long continued, the skin becomes sodden and fissured and in some cases a secondary eczema occurs.

TREATMENT.

In undertaking the treatment of pruritus the patient should be given a thorough examination to discover if possible the underlying cause. In the large majority of cases, however, we fail to find any definite disease further than that the patient is vaguely nervous or neurasthenic and we endeavor to build up his general health by proper diet and exercise.

In extensive pruritus of the body the under-clothing should be of cotton or silk. Wool should not be worn next the body. Too frequent bathing, especially hot baths, are apt to be harmful. A tepid or cool sponge bath every day or every other day will do no harm. A soft towel should be used for drying and unnecessary friction avoided.

In generalized pruritus soothing lotions such as

the calamine and zinc lotion or liquor carbonis detergens are often useful. One percent phenol and one-quarter of one per cent menthol may be added to these. In the localized forms of pruritus stronger applications may be used, the strength depending on the amount of thickening of the skin. Ointments containing from five to ten per cent of salicylic acid or from ten to fifty percent of coal tar are best, but they should not be used in the axilla or around the anus or vulva.

When the above measures fail we have a positive means of relief for all forms of pruritus, and one which is more permanent, in the use of the X-ray. This agent is not to be used by anyone unfamiliar with the method of measuring and controlling the exact dosage required. It is also incompatible with all irritating local applications² and if such have been used at least two weeks time should elapse before beginning radiation.

The technique of X-ray dosage which has been developed by MacKee, Remer and Witherbee enables us to give a definitely measured dose and to dispense with the troublesome and unsatisfactory pastilles. This technique is now being employed by dermatologists in many thousands of cases of skin disease. Ordinarily, we give fractional doses—one-fourth of a unit—once a week. A unit is the amount of radiation which, in a person of sensitive skin, might produce a slight, transient erythema. Where the skin is greatly thickened we employ somewhat larger doses.

¹For a complete presentation of this subject see the following: Wise, Fred.: *The Neurodermatoses and Pseudo-Lichens*. *Jour. of Cutaneous Diseases*, 37:9 (Sep.) 1919.

²MacKee, George M., and Andrews, George C.: *Injurious Combined Effect of Roentgen Rays or Radium and Topical Remedies*. *Jour. A. M. A.* 77:19 (Nov. 5) 1921.

IN MEMORIAM.

WILLIAM JAMES BURGE, M. D.

April 12, 1831—May 28, 1921.

Member of the Providence Medical Association from 1875. A graduate of the College of Physicians and Surgeons, New York, 1853, and in practice from then until the time of his death. Dr. Burge lived to a greater age than any other member of the Providence Medical Association with the exception of Dr. Francis L. Wheaton, who died in 1895, at the age of ninety-one, but he had withdrawn from active membership in the Association many years before because of the infirmities of old age, while it will be remembered that Dr. Burge continued as a quite regular attendant at our meetings to the last month of his life. Preserved in a remarkable way to a serene and buoyant old age, he literally "fell on sleep," for retiring apparently in his usual health on May 27,

1921, he was found dead in his bed the next morning.

He was born in Wickford, Rhode Island, on April 12, 1831, the son of Rev. Lemuel and Elizabeth Frances (Shaw) Burge, and Dr. Burge used to say that his mother told him that at his birth he weighed less than three and a half pounds and was so puny and lifeless that the nurse set him aside, exclaiming, "Poor little thing! 'Tis useless to do anything for him!" Yet he attained a vigorous manhood and lived to be ninety years old. His father was the rector of St. Paul's Episcopal Church in Wickford—the next to the oldest Episcopal Church in Rhode Island, founded in 1707. His father's father was James Birge, a farmer of Litchfield, Connecticut, a Revolutionary soldier. The older name of the family, which was of English descent, was Burge, and that form of the name was assumed by his son. His mother's father was Dr. William Gorham Shaw of Wickford, an Original Fellow of the Rhode Island Medical Society, who died in 1864, at the age of ninety-six. Through his mother's mother, Dr. Burge could trace his ancestry to the Brentons and to Roger Williams.

Dr. Burge's preliminary education was in Washington Academy, Wickford, and the Wesleyan Academy of the Providence Conference at East Greenwich. Before and for a while after attending the latter school he worked as an apprentice in the apothecary store of Edward T. Clark at 59 North Main Street, Providence, where William B. Blanding, then hardly twenty, was the clerk, and a few years later took over the business that has been conducted so successfully ever since by himself, his son, the late William O. Blanding, and grandson. (Mr. Edward T. Clark, by the way, was father of the late Dr. Franklin C. Clark of Providence, a member of this Association.) But having determined to become a physician rather than an apothecary, and after two years' further study under the tuition of Rev. Silas A. Crane of East Greenwich, he entered the College of Physicians and Surgeons in New York City, and in 1853 received the degree of Doctor of Medicine from that institution, which was then located on Crosby Street. (In January, 1856, the new building on Twenty-third Street was opened and in 1860 the College of Physicians and Surgeons became the Medical Department of Columbia University.)

Continuing in New York after graduation, he was for a time connected with the Surgical Department of the Central Dispensary on Centre Street, and was also Outdoor Surgeon of the New York Lying-In Asylum. In 1854 he settled in practice in Salisbury, Litchfield County, Connecticut, but in 1856 removed to Brooklyn, New York, where for three years he was associated

with his brother, J. H. Hobart Burge, M. D., University of New York, 1848. This was really a period of post-graduate study, for his brother was an expert surgeon, of whom it is said that he anticipated Dr. Gurdon Buck in the discovery and use of the plan of treating fractures of the femur by what is known as "Buck's Extension," or traction by weight and pulley. Our Dr. Burge then located in Taunton, Massachusetts, where he remained until, in January, 1863, he enlisted in the Navy, and receiving the appointment of Acting Assistant Surgeon, served as such until January 14, 1866. He was the medical officer on the *Ino*, *Albatross*, *Flag* and *Florida*, on blockade duty, and on the *Mississippi*. The flagship *Hartford* and the *Albatross* were the only vessels of the fleet that got past the batteries at Port Hudson in Farragut's expedition to the aid of General Grant in the siege of Vicksburg. Dr. Burge had the naval medal given to participants in distinguished services by the navy.

Upon his discharge from the navy, finding other physicians had taken his place in Taunton, he went to Atchison, Kansas, where he practiced until 1873, when he came to Pawtuxet, and, later removing his office to Edgewood, was actively engaged in general practice until 1916, and occasionally attended patients after that until the last days of his life. So that in all he was a physician for sixty-eight years.

In the early eighties Dr. Burge was for a number of years seriously ill with what was considered to be cancer of the stomach, and little hope was had for his recovery; yet he outlived all his attending physicians, the last of whom was Dr. William J. McCaw, who made use of lavage of the stomach, and to this in large part Dr. Burge felt that he owed his recovery.

Dr. Burge took an active interest in the welfare of the community in which he lived. When Trinity Chapel, now Trinity Episcopal Church, at Pawtuxet, was organized (largely through the efforts of his sister) he became Senior Warden, a post which he held until his death. He was also one of the founders of the Edgewood Free Public Library and chairman of its Library Committee.

Dr. Burge was a member of the American Medical Association, and served as a delegate from the Rhode Island Medical Society on three of the annual meetings of the National Society. He was elected a Fellow of the Rhode Island Medical Society in June, 1874, and became a member of the Providence Medical Association in 1875, and seldom was absent from their meetings. As a comrade of the Grand Army of the Republic he was connected with Slocum Post, No. 10, in the Department of Rhode Island, and was Sur-

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RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

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Meets the second Thursday in each month excepting July and August

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EDITORIALS

AN EIGHTEENTH CENTURY STUDENT OF TUBERCULOSIS.

One of the curious things in medical history, indeed, one may say in all history, is the forgetfulness of men. Important discoveries are made only to be forgotten, until years, it may be centuries afterwards, they are re-made and turned to practical account in the elucidation of disease or the treatment of it. On September 1, 1719, there lived in his house in Theobald's Row, near Red

Lion Square, in Holbourn, one Benjamin Marten, M. D., who published in that year a very remarkable work, entitled, "New Theory of Consumptions: more especially of a Phthisis or Consumption of the Lungs, wherein Enquiry is made concerning the Prime, Essential and hitherto accounted Inexplicable Cause of that Disease, so very Endemick to this Nation," Of the author very little is known except that one may gather from his book that he was well acquainted with the literature of his subject and was endowed with a bold imagination,—so bold, in truth, that his speculations being far in advance

of the medical mind of his time, fell upon deaf ears. That animalcules and disease were causally related was no new idea in the Eighteenth Century, but Benjamin Marten's conception of this relationship, its variety and extent, was far in advance of anything proposed by his predecessors or contemporaries; for he in fact propounded the germ theory as we hold it to-day and applied it not to tuberculosis only, but also to syphilis, rheumatism, small-pox, leprosy, plague, measles and common colds.

So interesting are his postulates that we shall give a few brief excerpts from his book as illustrating some of his remarkable opinions.

"The Original and Essential Cause then, which some content themselves to call a vicious Disposition of the Juices, others a salt Acrimony, others a strange Ferment, others a malignant Humor (all which seem to me dark and unintelligible) may possibly be some certain Species of Animalcula or wonderfully minute living Creatures, that, by their peculiar Shape, or disagreeable Parts, are inimical to our Nature; but, however, capable of subsisting in our Juices and Vessels, and which being drove to the Lungs by the Circulation of the Blood, or else generated therefrom their proper Ova or Eggs, with which the Juices may abound, or which possibly being carried about by the Air may be immediately conveyed to the Lungs by that we draw in, and being there deposited as in a proper Nidus or Nest, and being produced into Life, coming to Perfection, or increasing in Bigness, may by their spontaneous Motion, and Injurious Parts, stimulating and perhaps wounding or gnawing the tender Vessels of the Lungs, cause all the disorders that have been mentioned, viz., a more than ordinary Afflux of Humours, upon the Part, Obstruction, Inflammation, Exulceration, and all other the Phenomena and deplorable Symptoms of this Disease."

"And it is reasonable to suppose that there are various Species of Animalcula, so of course they are of various Magnitudes, of different Shapes, and have peculiar Parts . . . so various Diseases, more or less sudden and pernicious, may be caused (by them)."

"But I would not be understood to advance that all Distempers are caused by them; I would urge only the possibility and likelihood of their being the Essential Cause of the Plague, Pestilen-

tial and other malign Fevers, Small-pox and some other Diseases as well Chronic as Acute and particularly of that dreadful one a Phthisis which is the peculiar Subject of these Papers."

"It seems much more probable that the minute Animals or their Seed, which we have supposed to be the Essential Cause of a Phthisis or Consumption of the Lungs, are for the most part either convey'd from Parents to their Offspring Hereditarily, or communicated immediately from distemper'd Persons to sound Ones who are very conversant with them; the first way has been already mentioned when we were speaking of the Small-pox . . . the last way, which is properly called Infection, we may conceive to be more reasonable, if we consider how quickly and easily some other Distempers are communicated from one Person to another, as the Itch, Venereal Disease, etc., which are yet very far from becoming universal."

"It may be therefore very likely, that, by an habitual lying in the same bed with a Consumptive Patient, constantly Eating and Drinking with him, or by very frequently conversing so near, as to draw in part of the Breath he emits from his Lungs, a Consumption may be caught by a sound Person; for it may be reasonable to suppose that if the Blood and Juices of such distemper'd People be charged with vast quantities of Animalculae as I have conjectur'd, then their profuse Sweats, and their Breath, may be likewise charged'd with them, or their Ova or Eggs, which by that means may possibly be convey'd into the Bodies of those who lie, or are most conversant with them."

Such are some of the speculations with which Benjamin Marten busied himself. How modern and familiar is their ring, and yet it was not until 1882 that Robert Koch proved the truth of Marten's opinions.

ALASTRIM.

In May, 1920, an acute epidemic disease started in the city of Kingston on the Island of Jamaica. It spread over the rest of the island until by March, 1921, over two thousand three hundred cases had been reported. The epidemic is still going on.

The name given to it is Alastrim and it closely resembles mild small pox. The chief interest

aroused in it is its mild character, low mortality, and relation to small pox.

The incubation period seems to be about 14 days. It is ushered in by headache, fever usually about 103 degrees F., pain in the back, pain in the extremities and vomiting. Headache, pain in the back and limbs, and fever are the most constant. The symptoms are not very severe. The fever lasts three or four days, at which time the rash appears, on the forehead, wrists and forearms. It consists of discrete, slightly elevated papules which are superficial and not shotty to the touch. Within two days they appear on the mucous membranes of the mouth, throat and respiratory tract. There is some swelling of the face three to four days after the appearance of the eruption. At this time the eruption becomes vesicular. By the eighth day it becomes pustular, at which time it is umbilicated. The palms and soles are also the seat of pustules. The lesions are often painful and usually tender. They dry up rapidly and separate from the skin, leaving pigmentation but rarely "pitting." Often there is no secondary rise in temperature during the pustular stage and patients feel quite normal. Severe cases do occur, but out of 2,333 cases only ten died.

During this epidemic it was found that previous vaccination with cow pox virus while usually modifying the disease did not prevent it as completely as it does in small pox. Many patients were vaccinated after having had the disease and 40-50% had "takes," nearly all of which were very mild. Maccallum and Moody claimed to have observed Guarnieri bodies in material from Alastrim pocks, but were unable to successfully inoculate them into the skin or cornea of a rabbit. These bodies, first described by Prowazek, are found in large numbers about the lesions of vaccinia and small pox. By him they were considered the cause of the disease but this is not generally accepted. They seem to be valuable in diagnosis. The cornea of rabbits is injected with pus from the lesions and if the disease is small pox Guarnieri bodies with a lense are visible in the cornea.

The term Alastrim originated in Brazil, where this disease has existed for ten years or more. A similar disease has been reported as occurring in Cuba, Australia, Canada and elsewhere.

It would seem that this disease is very similar

to the mild small pox present in the United States for 15-18 years. Its clinical manifestation resembles it very closely and the mortality is about the same.

Whether the two diseases are identical or not it is a reasonable presumption that they are and that both are mild types of small pox. Certainly, even though it is very mild, no let up in the policy of general vaccination should be countenanced, because we do not know how soon severe small pox may replace this mild strain. Indeed, during the last few years small outbreaks of small pox have appeared in several cities of the United States and for several months Kansas City has suffered a serious epidemic in which the mortality is about 30%.

SOME ANCIENT MEDICINE AND MODERN PROMISE.

"Many men of many minds, write many books of many kinds." So goes the old "saw" and a great number of books written upon the same topic with sound and same basic principles adopted by various writers are so replete with half parallel and tangent deviations that one is bewildered or affected with mental stasis in even plodding through some of the reviews, and medical literature is no stranger to this condition of affairs.

Just now we are bombarded with monographs and seemingly every other form of literature on endocrinology; in the contemplation of which it is reasonably possible that we are on the threshold of discoveries that will make the re-writing of much of the now accepted medical literature a necessity.

And there is nothing wonderful in this, probably since the world began accepted standards have been tried, only in time to be proven inadequate and cast aside. The greatest authorities of bygone days have often been proven in error. When we realize that the antiquity of the practice of the treatment of disease or (as we speak of it) the practice of medicine, with its discoveries and fallacies, antedates all history, this will be better understood.

At the time that the noted disciple of Socrates and teacher of Aristotle, the aristocratic soldier-poet, Plato, was teaching in Athens, four hundred years before the birth of Christ, medicine as

a profession, was a very ancient science. The Ancient Hymns of the Vedas give glimpses of a civilization that was old centuries before Babylon and Ninevah arose in the Euphrates valley, and while Greece was still a tramping ground of a barbaric gibbering rabble, the Hindoos were not only living in villages and towns, had carpenters, coppersmiths and many other artisans, were taking accurate observations of the heavens, constructing tables by which the longitude of the sun and moon was determined, but possessed an extensive knowledge of chemistry, were said to be skilled in surgery and were beyond question the first to employ minerals internally as curative agents.

However, within the range of reachable authentic history, Hippocrates shines forth as the first great light in early medical science. History has shown him a great thinker and a great physician, but even he came to the conclusion that "There is nothing left to be discovered in medicine"—twenty-six hundred years ago.

Not to discuss Galen and not ignore him, we mention him in passing, for it is evident that he would have been a great philosopher if he had not already become great as a physician. Ambrose Paré, the noted French surgeon whose fascinating and scholarly style of writing illumines his discourse, offered rules of treatment and remedies not altogether compatible with scientific procedure today; as illustration, he suggests: "Therefore, physicians desirous of purging a sucking childe, purges the nurse; whence the milke becomming purging, becomes both meat and medicine for the sucking childe."

As a cure for "Madde dog" bite, he suggests that: "Brimstone powdered and tempered with one's spittle is good to apply."

If one is bitten by a snake, "Put him in a warm bed, procuring sweat and making him lie awake, lest sleep should draw the poyson inwards to the entrailles."

He likewise warns "Not to allow a wet-nurse with a squint to nurse a childe, lest the childe contract this affliction." He also frequently referred to the excreta of animals as curative agents. However, his masterly treatment of gunshot wounds and his improvement on sutures added much to the reputation of an already famous surgeon. But when Jenner, in 1796, vaccinated the boy of

eight from a dairy maid infected with cow-pox, he unconsciously opened the door of revolution in the practice of medicine and unwittingly became the great pioneer in medical discovery; introduced the principle of antitoxin as a preventive measure and indicated to posterity the value of this great principle which future generations have developed and will continue to develop with what brilliancy years that are to come will prove.

The work of Koch, Pasteur and many others is but a parallel elaboration of this principle directed in divers paths. And this principle, enlarged, diversified and exalted, will stand as a monument to medical achievement in the annals of all time.

No longer are we to fight weaponless the blight of disease with vitality only as an ally, but meet it upon its own ground and that with confidence; and all the result of an accidental observation more than four hundred years ago. The last fifty years of medical progress, however, gathering momentum, one may say, hourly, is rapidly placing medicine and surgery upon the solid foundation of proven fact, and this dual constellation of science shines brightest of all in the firmament of humanitarianism.

SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION.

The regular monthly meeting of the Providence Medical Association was called to order by President Frank T. Fulton at 8:45 P. M. on November 7, 1921, at the Medical Library.

The records of the last meeting were read and approved.

Applications for membership of the following men having been approved by the Standing Committee, the Secretary was empowered to cast one ballot for their election: Dr. Harold C. Miner, Dr. Frank Smith Hale.

The paper of the evening was read by Dr. Henry A. Christian of Boston, Massachusetts, on the Relationship Between Hypertension, Myocarditis and Nephritis. Dr. Christian differentiated between arterio-sclerosis and high blood pressure. He showed that hypertension, nephritis and myocarditis were often associated but not necessarily interdependent, and pointed out a close relationship between these conditions in that vascular lesions apparently were responsible; these lesions

consisting in a narrowing of the arterioles. Antecedent infections seem to lead to these troubles, although strangely, syphilis did not appear to be a cause. There is a little evidence that endocrine disturbances play much part. He felt that we should emphasize the resemblance rather than the difference in these conditions. Dr. George S. Mathews discussed the paper. Dr. Christian, in reply to a question, stated that the results of salt restriction were not satisfactory and that there was danger of injuring the appetite of the patient.

Dr. White moved adjournment at 10:05 P. M.

Attendance: One hundred and one members and one guest.

Collation was served.

Respectfully submitted,

PETER PINEO CHASE, M. D., *Secretary*.

Dr. William R. White: "I have a message to communicate to you which I should have communicated in September. A good many of us know that in August the Harvard Alumni of New England was invited to spend a week-end at the St. George's School at Newport. About 200 of us availed ourselves of that great privilege. We arrived Friday and were advised that Doctor Storer, oldest member of the association in the State, would be glad to see any of the alumni. The next morning we were told that 31 of the alumni went around and called on Doctor Storer. I, myself, reserved the privilege for Sunday and spent a half hour with Doctor Storer. He will be 92 in February. He is helpless; confined to his chair and table; unable to leave his chair without the assistance of a trained nurse but mentally just as clear as ever and it certainly was a very impressive half hour when he indulged me with reminiscences and spoke about scientific advancement.

Dr. Storer said, "Give my regards and best wishes to the R. I. Medical Society when you meet with them." He said he had always had a great regard for this Society. It is a privilege to communicate this message to you.

The regular monthly meeting of the Providence Medical Association was called to order by President Frank T. Fulton December 5, 1921, at 8:55 P. M., at the Medical Library.

The records of the last meeting were read and approved.

In accordance with Article I, Section 6, of the

By-Laws, the Standing Committee presented the following nominations for officers and committees for the year 1922:

For President—N. Darrell Harvey, M. D. For Vice-President—William B. Cutts, M. D. For Secretary—Peter Pineo Chase, M. D. For Treasurer—Charles F. Deacon, M. D.

For Member of the Standing Committee for Five Years—Frank T. Fulton, M. D. For Trustee of Rhode Island Medical Library Building for One Year—Herbert G. Partridge, M. D. For Reading Room Committee—G. S. Mathews, M. D., M. B. Milan, M. D., H. A. Cooke, M. D.

For Delegates to the House of Delegates of Rhode Island Medical Society—F. N. Brown, M. D., J. B. McKenna, M. D., F. G. Phillips, M. D., G. T. Spicer, M. D., C. A. McDonald, M. D., J. P. Cooney, M. D., G. A. Matteson, M. D., J. E. Donley, M. D., Herbert E. Harris, M. D., Bertram H. Buxton, M. D., Peter P. Chase, M. D., Ira H. Noyes, M. D., Prescott T. Hill, M. D., William P. Buffum, Jr., M. D., George R. Barden, M. D., J. B. Ferguson, M. D.

Dr. C. H. Leonard read a memorial to Dr. W. J. Burge and Dr. W. R. White followed with a eulogy, and the Secretary was instructed to file a copy in the archives and send copies to Dr. Burge's family.

It was moved and seconded that the yearly dues be made \$5.00 and after discussion a movement was carried that the matter be referred to the Standing Committee for a report at the next meeting.

Dr. Douglas Quick of New York City read a paper on "Response of Various Types of Cancer to Radium." He did not make a special plea but felt that our best hopes were in a triple alliance of radium, X-ray and surgery, deprecating using it as a last resort when other methods failed. After this he discussed its action in the various types of tumors and spoke briefly of the different methods of application. Following this he showed illustrative lantern slides.

Dr. Greenough, in his discussion, mentioned Dr. Deaver's recent medical remarks on the slight value of radium treatment which he interpreted as a "bomb-shell" to stop the spread of an exaggerated belief in its efficacy. He characterized radium as the greatest help to the surgery of cancer since anesthesia and asepsis, but insisted that it was an

aid, not a competitor. Dr. Pitts spoke of some research in this line at the Rhode Island Hospital. Dr. Gerber read a paper on "Some Aspects of the New Intensive X-ray Treatment."

The meeting adjourned at 11:00 P. M. Attendance: One hundred members and seven guests. Collation was served.

Respectfully submitted,
PETER PINEO CHASE, M. D., *Secretary*.

WOONSOCKET DISTRICT SOCIETY.

The Woonsocket District Medical Society held a well attended meeting at St. James Hotel, Woonsocket, on December 15, 1921. Routine business was transacted. It was voted that it was the sense of the meeting that the meetings of the R. I. Medical Society should be held in the forenoon instead of the afternoon.

A very interesting paper, entitled, "Reminiscences," was read by Dr. John J. Baxter, Woonsocket, after which a buffet lunch was served.

A. H. MONTY, M. D., *Secretary*.

WASHINGTON COUNTY MEDICAL SOCIETY.

The annual meeting of the Washington County Medical Society was held January 12, 1922, and the following officers were elected for the ensuing year: President—A. S. Briggs, M. D., Ashaway; 1st Vice-President—J. E. Ruisi, M. D., Westerly; 2nd Vice-President—F. E. Burke, M. D., Wakefield; Secretary and Treasurer—W. A. Hillard, M. D., Westerly; Auditor—S. C. Webster, M. D., Westerly; Censor for 3 years—John Champlin, M. D., Westerly; Delegate to R. I. Medical Society for 2 years—P. J. Manning, M. D., Wickford; Councilor to R. I. Medical Society for 2 years—F. I. Payne, M. D., Westerly.

Respectfully,
W. A. HILLARD, M. D., *Secretary*.

SECTION IN MEDICINE.

The annual meeting of the Section in Medicine was held at the Medical Library Tuesday, December 27th, 1921, at 8:30 P. M., Dr. Charles A. McDonald presiding. The following officers were elected for 1922: Charles A. McDonald, M. D., Chairman, 106 Waterman Street, Providence, R. I.; Creighton W. Skelton, M. D., Secretary-Treasurer, 266 Broad Street, Providence R. I. The paper of the evening was read by Dr. Chester Jones of Harvard Medical School on "The Duodenal Tube, Its Use and Abuse." The paper was discussed by Drs. Lenzner, Berry, Wing, Bur-

gess and DeWolf. Next meeting will be Tuesday, January 24th, at Medical Library, 8:30 P. M.

DR. CREIGHTON W. SKELTON, *Sec.-Treas.*

HOSPITALS

CITY HOSPITAL.

Dr. Dennett L. Richardson was re-elected Superintendent of the City Hospital Wednesday, January 4, at the annual meeting of the Board of Hospital Commissioners.

Dr. Harmon P. B. Jordan was elected First Assistant Superintendent, and Dr. William Holt, Second Assistant Superintendent. Miss Sarah C. Barry was again chosen Superintendent of Nurses.

The following were elected members of the consulting staff of the institution: Drs. Joseph M. Bennett, Frank T. Fulton, Halsey DeWolf, Edmund D. Chesebro, Frank L. Day, George S. Mathews, Edgar B. Smith, John W. Keefe, Gardner T. Swarts, John T. Farrell, N. Darrell Harvey, Frederick T. Rogers, George W. Van Benschoten, George L. Shattuck, John E. Donley, Harvey B. Sanborn, Murray S. Danforth, Roland Hammond and Albert H. Miller.

The visiting staff for the coming year was selected as follows: Drs. Jay Perkins, Pearl Williams, Alex. M. Burgess, M. J. Nestor, Prescott T. Hill, Henry J. Gallagher, Elliott Washburn, Carl D. Sawyer, Nat H. Gifford, Bertram H. Buxton, Frederic J. Farnell, James W. Leech, Hilary J. Connor, Roy Blosser, Louis J. Cella, Raymond G. Bugbee, Eric P. Stone, Parker Mills, J. Edwards Kerney, James A. McCann, John G. Walsh, Anthony Corvese, Ira Noyes, William C. Muncy, Henry E. Utter, William P. Buffum, John T. Monahan, Robert M. Lord, George T. Spicer, Edward A. McLaughlin, Maurice Adelman, Alex. M. Burgess, Paul C. Cook, Charles F. Gormly, Elihu S. Wing, Frank Berry, F. Nelson Bigelow, John J. Gilbert, William C. McLaughlin, Frank M. Adams, Frank J. McCabe.

Department of Dentistry—Drs. Walter C. Robertson; Bacteriologist—Prof. Frederic P. Gorham.

NEWS ITEMS.

The annual meeting of the Board of Hospital Commissioners was held at the hospital on Wednesday, January 4, 1922.

The annual meeting of the Staff Association was held on Wednesday, January 18, 1922.

The hospital is about to install a new refrigerating plant which fills a long-felt need.

ST. JOSEPH'S HOSPITAL.

The St. Joseph's Hospital Staff Association held its regular meeting Friday, January 13th, 1922, at the Out-Patient Building, Peace Street, at 9:00 P. M.

G. F. JOHNSON, *Secretary*.

[Continued from Page 199]

geon of Slocum Post continuously from 1911. He attended not only the annual encampments of the Department in Rhode Island but also attended all the recent National Encampments of the order, the last being that at Indianapolis in 1920; then though eighty-nine he went on alone to Minneapolis to visit his daughter. He was also a member of the Sons of the American Revolution, and one of the few, of late years, who could remember talking with a grandfather who fought in the Revolution. In politics he was always a Republican, and he cast his first vote for John C. Fremont at the presidential election in 1856.

Dr. Burge was twice married. His first wife was Frances Burling Vose of Westerly, step-daughter of Rev. Thomas Vail, who afterwards became Bishop of Kansas. They were married September 7, 1854, and she died in 1876. Four children were born: Edward and Frances, who died in infancy; Mary Chandler, wife of the late John T. Jeter of Dallas, Pennsylvania, and Bessie Vail, wife of Rev. George Buzzelle of St. Andrew's Episcopal Church, Minneapolis.

On October 16, 1883, he married Mary (Doolittle) Arnold, daughter of the late United States Senator James E. Doolittle of Wisconsin. She died in 1913. They had two daughters: Dorothy Brenton, wife of Charles R. Stark, Jr., of Brookline, Massachusetts, and Sara, wife of Karl Rittman, with whom Dr. Burge made his home at 180 Albert Avenue, Edgewood, since 1916.

Dr. Burge was devoted to his family and his home, and he was proud of his children's children and his great-grandchildren. Would that he could have gathered his entire family about him for a group picture! It would have included not only those already mentioned but thirty now living of the seventeen grandchildren and fifteen of the great-grandchildren that had been born before he died.

He was a good physician, bringing cheer and help to his patients, and inspiring them with courage. He was also of an inventive bent, and many practical appliances may be credited to his ingenuity—among them a sure-cut scissors, a wire (removable) basket to fit the inside of a wash-boiler, a folding trellis for plants of vines, and an appliance such as is now used for clearing mist from the front of an auto wind-shield, though his idea was that it should be used on the street cars. But most important was an emery wheel to be used by manufacturing jewelers, who previously had been using wheels made of emery paper or other fabric fastened to wooden disks. He neglected making application for a patent, as he was then about to join the navy, and when he returned from the war another person had obtained a patent for it.

Our Dr. Burge also had a poetic gift. His

verses dedicated to the memory of Dr. J. W. C. Ely, who died soon after the long to be remembered dinner given in 1906 in commemoration of his having completed sixty years of practice, were well conceived and well completed. Less familiar is the briefer tribute to the memory of Dr. Capron, who died in 1882 at the age of eighty-two.

"DR. GEORGE CAPRON."

"Dead; didst thou say? Such men can never die!
His work has wearied him, so let him lie,
And take the sweet God-given rest
Prepared for those whose deeds are blest.
Long has he toiled, and earnestly as long,
To heal the sick and make the feeble strong.
His task is nobly done; so let him sleep
Till he awakens, his reward to reap."

The lines may well be inscribed to the memory of Dr. William J. Burge. He toiled long and well, and "laid him down to sleep."

Thus in review have been placed the milestones, as it were, in the life-history of Dr. Burge, but by those of us who knew him how much must be read between those biographic lines, of the fullness of the four score years and ten of his eventful life, for it was surely an active, useful life, a life of service to his kindred, his neighbor, his church, his country. And, best of all, his life of service continued to the end.

How gladly we remember his constant attendance on our meetings and how he came among us, our oldest member, our "grand old man," as we often called him, and still as young as the youngest in his alert, genial, friendly manner, his interest, his pleasure in the lunch, the smoke, the chat, his readiness with story and reminiscence.

And at the meeting's close do we not still see him rise quickly, stand erect and with all courtesy and evident enjoyment move adjournment?

Let us cherish the memory and example of such a man whose long life was as an open book, who loved and served his fellow-men, whose faith in God and a future life was impregnable.

Some of us knew Dr. Burge in his home life in recent years, and saw a beautiful example of the love and trust sometimes existing between the very old and the very young, and we are glad that his last years were happy ones, that he was tenderly cared for by his own, that he was bright and active to the end and knew no period of illness and pain, but rather fell asleep, like as a child, to awake to the morning of another life.

With respect and affection let us, his brothers, rejoice that in the words of the service he loved so well, it was vouchsafed unto him "in health and prosperity long to live" and that the unheralded transition found him prepared.

By request of the President, submitted jointly by

CHARLES H. LEONARD, M. D.

WILLIAM R. WHITE, M. D.

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ORIGINAL ARTICLES

TREATMENT OF PEPTIC ULCER.

By GEORGE A. MATTESON, M. D., F. A. C. S.,
Providence, R. I.

Whether this dual disease, with its manifestations in any part of the acid-bathed portions of the upper alimentary canal, comes exclusively within the scope of the internist or the surgeon has been a mooted question ever since our student days. The domain has alternately been won over by one class of practitioner or the other at different periods, as a pre-eminent exponent of the one school has been able to compel the attention of the profession in general, to the discomfiture of the other. At about 1905 the Mayos began to report their first considerable series of brilliant surgical results from the operation of gastrojejunostomy, a technic which they themselves did so much to perfect and which remains practically unimproved to this day. During the next decade a multitude of surgeons had more or less mastered the method and the number of cases treated by operation was greatly multiplied. The momentum which accompanies the launching of every new idea swung the pendulum far over into the surgeons' field, so that during this time we had little patience with the medical man who denied our surgical ownership of the treatment of peptic ulcer from start to finish.

Brilliant as the results were during the earlier days, it later became manifest that more than an occasional case failed to respond satisfactorily to this single operation. It has been pointed out that the earlier operations were performed in a greater proportion on individuals who presented the later results of this chronic disease, among which obstruction was the most prominent, and hence the full benefit of this valuable procedure was obtained. As the refinements of examination advanced, so that earlier diagnosis became common, cases of a different stage of the same disease were treated by the original operation but without the same apparent cures resulting. Though the percentage of satisfactory results have never fallen

below a most respectable level, yet disappointments were of sufficiently frequent occurrence to cause a reaction against the complete surrender to the surgeon and a re-examination of the internist's offerings. In 1915, Bertram W. Sippy, of Chicago, had become the leading exponent of the medical treatment of peptic ulcer and had elaborated a régime so complete and so rational, as he describes it, and so successful, as he reports it, that even the surgeons' faith has been shaken. Such brilliant leaders as Moynihan and the Mayos have made some concessions to him.

The medical treatment of peptic ulcer in accordance with Sippy's method is rather a long story, both for us and for the patient, but an outline is necessary if we are to attempt to reach a conclusion as to its value. Its basic principle is the protection of the denuded surface from the corrosive action of the acid in the gastric secretion. By maintaining a continuous neutralization by means of diet and the administration of alkalies, he is convinced that the vast majority of ulcers can be cured more quickly and more safely than by any surgical means. It is his view of the etiology that malnutrition, through infection, produces necrosis of the surface of an area in the stomach or duodenum and that digestion by the acid-activated pepsin follows. The free acid continues its corrosive action on this area, preventing the normal healing process, inflammatory induration surrounds the ulcer, and pyloric spasm, retention of stomach contents and hypersecretion follow.

His patients are put to bed for three or four weeks, receiving treatment every hour or every half-hour, both day and night; during as much of this period as their symptoms remain active or their analyses show indications for it. The patient receives 3 ounces of milk and cream every hour from 7 A. M. to 7 P. M. After two or three days, if progress is satisfactory, 3 eggs and 9 ounces of cereal is added to this total. Half an hour after each hourly feeding a powder consisting of 10 grains sodium bicarbonate and 10 grains calcined magnesia, alternating with 10 grains bismuth subcarbonate and 20 grains sodium bicarbonate, is given, and these powders are dou-

bled in frequency during the evening after the last feeding until 10 P. M. At 10:30 the stomach contents are aspirated, and if the quantity of secretion and residue is over 100 c. c., and its acidity high, several more aspirations may be done before morning and increased doses of alkalis administered. This nocturnal hypersecretion is said to be quickly controlled, so that the nightly aspirations can be omitted after three or four days. Gastric analyses and test of motor functions are made at frequent intervals during the course of hospital treatment to determine accurately that the free acid is being positively controlled and the retention overcome. After the first three or four weeks simple additions are made to the diet, but the hourly feedings and hourly alkaline powders are continued for months or even a full year. After many weeks, occasional temporary intermission of all treatment is allowed, the patient taking three regular, although judiciously selected meals a day for a day or two, but only as a test of his digestive capacity. If nothing unfavorable occurs these experimental reprieves are lengthened and increased in frequency until the patient leads a fairly normal life.

Within a week under this régime pain is allayed, pyloric spasm relaxed and retension of hypersecretion corrected. The obstruction due to chronic inflammatory induration commences to melt away and much improvement is regularly observed even when true cicatricial stenosis is present in considerable degree.

Sippy makes the assertion that gastro-enterostomy can favor the healing of an ulcer only insofar as it hastens emptying of the stomach and has the authority of many fluoroscopic and aspiration observations confirming his statement that this operation does not materially influence the emptying time, except in marked pyloric obstruction. He also points out that in spite of the artificial opening in the stomach, food, secretion and free acid continue to pass through the ulcerated pylorus.

He suggests that only such ulcers as are situated near the pylorus, or become large in some other location, or penetrate to the peritoneum, or cause bleeding, or become malignant, produce serious symptoms, and that probably there are very many cases of indefinite indigestion which are undiagnosed but due to ulcer.

He would limit surgery to cases resulting in: 1. Perforation. 2. Perigastric abscess. 3. Carcinoma. 4. Hour-glass contraction or other serious deformity. 5. Hemorrhage of a persistent and threatening degree, unchecked by accurate neutralization, and, 6. Serious cicatricial stenosis of the pylorus. (He finds only 10% of the cases showing obstruction prove to be unyielding scar contractions.)

Eggleston, of the Battle Creek Sanitarium, reports on 156 cases treated more than three years ago. Seventy-two per cent are classed as cured, 28% recurred. The duration of symptoms averaged $7\frac{1}{2}$ years and the hospital stay, 5 weeks. Thirty-five per cent were relieved of symptoms by two weeks' treatment, which is in accordance with Sippy's method. A quotation from his article says, "The patient must understand that he is to follow the restricted diet for months and even years afterward." One gathers from his paper that recurrences are always due to "dietetic carelessness"—thus putting all the blame on the patient and exonerating the system of treatment.

He concludes that:

1. Recent cases can be cured by medical treatment and regulation of diet, persisted in for several months.

2. Relief is to be expected in 70% of cases of long standing.

3. Operation is indicated for pyloric stenosis not yielding to neutralization treatment, for repeated bleeding, for penetrating and perforating ulcers, and when prolonged medical course is for any reason impossible.

4. Gastro-enterostomy should be supplemented by excision of ulcer or resection or some other direct attack on the diseased area.

Rehfuß tabulated 842 complete curves of hydrochloric acid secretions with various test meals, making more than 20,000 titrations, and concludes that no acid figures occurred in disease that could not be duplicated in health. He doubts that hyperacidity as a continuing or significant symptom ever occurs.

Frank Smithies, Associate Professor Medicine, University of Illinois, cannot recognize the influence of hydrochloric acid in the production or persistence of peptic ulcer. He cites an investigation of this point in 2,100 cases of proved ulcer and found excessive acid in only 33%, the amount being normal or below in 66%. In support of

this observation, he points out the kindly healing of surgical wounds of the stomach in the presence of hyperacidity, the impossibility of producing ulcer experimentally by introducing strong acid into the stomach, and, conversely, the occasional advance of the ulceration to perforation in spite of carefully maintained neutralization of the acid.

Bastedo, Associate Professor of Medicine, Columbia University, urges careful medical course in all cases, following Sippy in principle, and refers a case to the surgeon only when the patient continues to have: 1. Bleeding. 2. Pain. 3. Nausea. 4. Pyloric spasm. 5. Inability to take usual foods. 6. Inability to take enough food for an active life. 7. Recurrence after an apparent cure.

He denies the value of gastro-enterostomy, except in cases of pyloric obstruction, declaring that this operation does not relieve the ulcer-bearing area of activity and pressure, does not accelerate emptying time, does not neutralize increased acidity by admitting bile and pancreatic juice into the stomach.

SURGICAL TREATMENT.

Coming now to the surgical attitude toward the question of treatment of peptic ulcer, we find the leaders with open mind toward the contentions of the internists, although not fully prepared to accept their explanations of the indications for medical treatment or the permanence of their cures in certain types of cases.

Moynihan admits that ulcer *may* heal under continued care and regulation of life and diet, but points out the rarity of finding scars either at autopsy or in the operating room that could indicate complete healing of a persistent ulceration. He indicates the constant typical tendency to ulcer to recur after apparent cure and deplors allowing pyloric stenosis and other distortions of the stomach to develop under medical observation. Still he is willing that medical treatment should be tried in many cases presenting no obvious contra-indications, although he is skeptical as to its applicability to patients whose economic status does not allow them leisure and financial independence. Surgically, he approves Balfour's cautery excision but thinks the indications for the more radical resections should be extended, especially in cases of large ulcers situated far from the pylorus.

Deaver thinks that *early* ulcer might be cured by medical measures if it were possible to detect the

condition while it is truly early. To his mind the 90% of cures which he is able to report in a series of 103 cases operated upon more than two years ago, is the best argument in favor of surgical treatment. He believes that gastro-interostomy does lessen acidity in the stomach to the extent of 30% and advocates this operation as an adjunct to any other procedure that may be carried out, in all cases characterized by hyperacidity. In addition he resects after the Polya technic for large ulcers of the lesser curvature near the pylorus, excised ulcers of the anterior wall and of the posterior wall by means of opening the anterior wall, with or without gastro-enterostomy, depending on the degree of acidity. Duodenal ulcers are excised when small, or removed by pylorectomy when large. Here again the degree of acidity determines the addition or omission of gastro-enterostomy.

C. H. Mayo, writing in March, 1921, discusses the subject in various phrases, quoting figures derived from an analysis of 1,191 gastric and 4,532 duodenal ulcers operated upon at the clinic from 1906 to 1920. He seems to accept Rose-now's demonstration of selective bacterial affinity as the most probable etiological exciting cause of ulcer. In reply to the argument advanced by all the advocates of medical treatment to the effect that stomach surgery is dangerous, he reports a hospital mortality for the operations on the duodenal cases of 1.76% and 3.77% for the gastric cases. He also states that numerous cases diagnosed by every available means as ulcer turn out to be something else on the operating table. He has seen definite surgical complications arise during the course of careful medical management. However, he gives his approval, though without enthusiasm, of a consistent and conservative medical course in the milder cases, especially in young patients. The present practice in the surgical treatment at the Mayo Clinic excises or cauterizes a small ulcer of the duodenum without gastro-enterostomy except when hyperacidity is present. The same procedure suffices for small ulcers in the stomach with the same reservations in regard to the degree of acidity. For larger and more calloused ulcers near the pyloric ring and on either side of it, gastro-jejunostomy is done, frequently with extensive resections of the Polya type.

The figures show 70% of the duodenal cases cured permanently by gastro-enterostomy, and 27% sufficiently benefited to be considered satisfactory results, leaving only 3% of unsatisfactory results.

He summarizes the treatment in these words:

"In the surgical treatment of ulcer we have applied a well-known principle of agriculture: an acid and continuously wet soil is tile-drained and its surface lined."

CONCLUSION.

From the incomplete review of the recent literature on this subject, it is apparent that the question of treatment remains in dispute just as it did 15 years ago. Still, concessions have been made by both sides of the controversy and the truth which lies somewhere between the two extremes has been approached a little nearer by each. I think we may say that the advance in diagnostic facility has uncovered a certain number of relatively early cases in younger subjects who had best be treated medically, at least so long as they do well and remain well. But when recurring or increasing symptoms or X-ray investigation demonstrates that cure is not resulting, then operation should be urged before the advance of the process necessitates one of the serious mutilating resections. On the other hand, the surgeon has learned more definitely the indications for the several different types of operation necessitated by the various types of ulcer cases and should be able to improve his percentage of complete cures. The attack must be more directly on the ulcer itself, with gastro-jejunostomy confined to its proper field of partial drainage and partial neutralization.

We must also recognize the importance of dietetic supervision after operation, and cease pointing with pride to our post-operative patients who "can eat anything" even before they leave the hospital.

HYPERTROPHY OF THE THYMUS GLAND.

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Hypertrophy of the thymus gland and symptoms resulting from the hypertrophy have for many years been the source of much discussion. It is well known that many children have an en-

larged thymus gland which does not produce symptoms. This has been recently proven with the use of the Roentgen ray by Blackfan and Little,* who demonstrated the presence of an enlarged gland in nearly 50 per cent of a series of infants examined by them. Just what determines the advent of symptoms in these children is not known.

The thymus gland occupies a position in the anterior and superior mediastinal spaces and is composed of two lateral lobes which approximate upward in its narrowed portion over the trachea to the lower border of the thyroid gland. It varies in weight from five to 15 grams, any gland weighing more than the latter figure being considered pathological, although some writers on the subject have considered 10 or 12 grams to be above the normal weight.

The gland increases in size until the age of two years, at which time degeneration begins. Functionally, the physiology of the gland is not well known. Briefly, the gland seems to bear some relation to the phosphorus and calcium metabolism, inasmuch as thymectomized dogs show an overgrowth of fat tissue and especially a low calcium content of bones and hyperplasia of cartilage cells. Injection into rabbits of the expressed juice of the thymus gland caused a fall in pulse rate and blood pressure.

Clinically, hypertrophy of the thymus gland produces a variety of symptoms which fall into fairly definite syndromes.

Type 1. Children presenting severe attacks of suffocation or choking with cyanosis. These attacks may last only a few minutes and come at varying intervals of time. When the hypertrophy is progressive the attacks may appear two or three times a day. This type is seen more commonly in early infancy, severe and often fatal cases being seen as early as the first few days of life. The cyanosis may be slight or marked and persistent until death ensues or relieved by treatment.

In cases seen in the first few weeks of life the thymus may be enormously enlarged and produce death by pressure. Such a case is reported by Brayton and Heublein.†

Case 1. J. K., 4½ months normal breast baby, was seen postmortem. The mother stated that on the day previous to death that the baby had two suffocative attacks associated with blueness of face, which she thought were due to

something the baby put in the mouth. These were relieved by slapping the baby on the back. The following morning, following a severe suffocative attack, the baby suddenly died. Autopsy revealed a thymus weighing approximately 25 grams. The trachea showed no signs of compression. Heart and lungs were normal. No foreign body was found in trachea.

Case 2. Seen by W. P. Buffum, Jr. From birth frequent attacks of cyanosis. Roentgen ray by Dr. Gerber on fifth day of life showed marked hypertrophy of thymus. Radium treatment instituted. Attacks gradually lessened in severity. Complete recovery.

Type 2. Children usually in second year of life presenting attacks of cyanosis, followed by prostration, pallor and weak pulse. In this type of case the cyanosis may appear about the lips or the whole face and extremities may be involved. Occasionally there may be shortness of breath upon exertion. This is the more common type of the condition seen in routine practice among children. The attacks of cyanosis may last from two to twenty minutes and come at intervals of several days or even weeks.

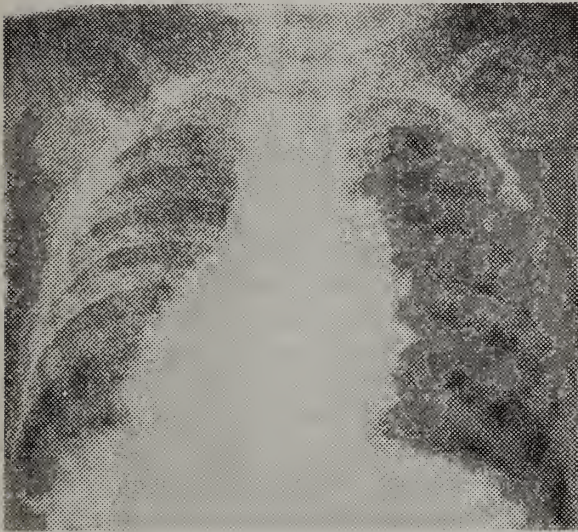


Fig. 1 (Case 3) Showing at base of Heart, due to enlarged Thymus

Case 3. C. G., 1½ years of age, previously well. Ten and again four days before seen had attacks of cyanosis followed by weakness and pallor. Percussion second space, thymic dullness 3-4 c. m. either side from median line. X-ray showed wide thymic shadow. Radium

treatment instituted by Dr. Gerber. One attack of cyanosis day following treatment. Since then (May, 1920,) no attacks.

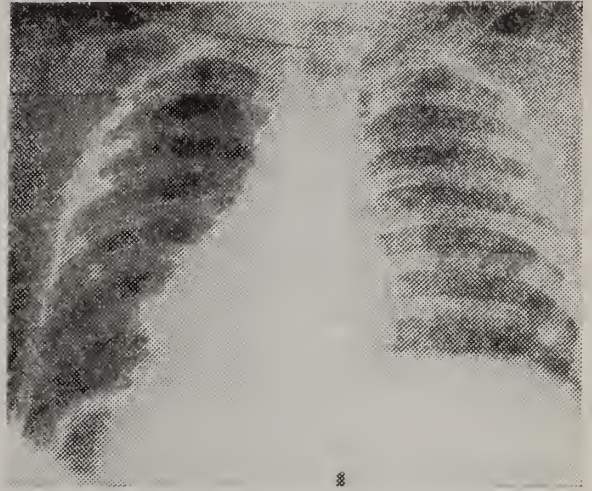


Fig. 2 (Case 3) Disappearance of Thymus Shadows after Radium Treatment

Type 3. Cases presenting laryngeal stridor and so-called thymic asthma.

Children or infants presenting this manifestation of thymus hypertrophy are less commonly encountered than those coming under the first two types.

The earliest symptoms may be an increase in the respiratory rate and pulse rate with no rise in temperature. Then may follow after some days or weeks a laryngeal stridor, which is more marked upon expiration. In the next stage there may be a considerable degree of dyspnoea without cyanosis except in extreme cases when cyanosis appears. Upon auscultation in these cases we find wheezing sounds throughout the chest. The following case illustrates this condition.

Case 4. B. S., seen at 4½ months. The parents reported that there had been rapid breathing from birth with no discomfort, however, to the child. There had since been cyanosis. During examination the respiratory rate varied between 100 and 130 per minute. The infant apparently suffered no discomfort. There was an area of dullness extending 4 c. m. to right of midsternum in second intercostal space. Roentgen ray did not verify diagnosis of thymus hypertrophy. This infant was referred to the family physician as a case of probably hyper-

trophy of the thymus. Six weeks later dyspnoea and asthmatic breathing appeared and the condition became extreme. Roentgen ray showed slight shadow to right of the sternum. Radium treatment was instituted with nearly complete subsidence of all symptoms. Ten months later child was perfectly normal.

Type 4. Cases of sudden death. This group includes children who die suddenly upon the use of an anaesthetic, more particularly chloroform, or following some simple surgical procedure.

A variety of physical signs denoting an enlarged thymus have been reported by different observers. Bulging in the suprasternal notch and prominent veins in the skin covering the upper part of the chest anteriorly have been reported. Such signs are of rare occurrence.

One physical sign usually found, but not always, is dullness in the second intercostal space, extending to either side of the mid line. To obtain this dullness the infant should be placed in the dorsal position with the head flexed. Light percussion must be used because of the superficial position of the thymus beneath the sternum.

We have in the Roentgen ray the best means of a positive diagnosis. There appears a definite shadow above the base of the heart, extending to the right and left of the median line. This shadow is continuous with the outline of the heart, extending upwards to the upper limit of the sternum. Doubtless in some cases in which the hypertrophy has taken place in the antero-posterior diameter of the gland there are negative X-ray findings, except occasionally when a lateral view of the chest wall is taken. Some discrepancies appear between Roentgen ray findings and dullness found upon percussion. Such conditions are difficult of explanation.

The Roentgen ray is valuable in differentiating these cases from cases of bronchial asthma, laryngeal stridor, laryngismus stridulus or other obstructive conditions existing in the thoracic cavity.

Much discussion has arisen concerning the origin of symptoms from thymic hypertrophy. Two theories exist—one that the symptoms are due to obstruction of the air passages or great vessels, and the other that the symptoms are toxic in origin.

Doubtless there are cases which are due to obstruction, such as those seen in the early weeks of life, when continuous cyanosis and dyspnoea are prominent symptoms, and in those cases of advanced thymic asthma with cyanosis.

The preponderance of evidence from clinical manifestations of thymus hypertrophy seems to be in favor of a toxic origin of the symptoms.

The cases presenting attacks of cyanosis without suffocation, the most common clinical type, favor the toxic theory. The long intervals between attacks, the prostration and stupor which follow these attacks and the absence of dyspnoea, make the likelihood of obstruction as a cause seem quite improbable. Infants who show rapid breathing and even signs of asthma, bear further evidence of a toxemia. Adherents to the toxic theory attribute the cases of sudden death following some slight accident, as due possibly to the sudden liberation into the blood stream of toxic products. Pappenheimer[§] considers that the vast number of lymphocytes found in the thymus gland in these cases, to be a manifestation of secretory activity.

Some cases present a marked hyperemia of skin, denoting possibly a toxic action upon the vasomotor center and it is quite probable that the cyanosis is due to a similar effort upon the respiratory center.

Anatomically, obstruction due to an enlarged thymus could only take place at the superior opening of the thorax, in which position the gland lies just behind the manubrium sterni. This portion of the gland does not usually present the amount of hypertrophy which is shown in the lateral lobes and it is quite inconceivable that pressure upon the trachea or great vessels could exist at the site of the lateral lobes.

The following case is reported as illustrating the possibility of a toxic origin of symptoms, even though obstructive symptoms seemed to form the predominating feature of the illness.

Case 5. H. N., age 15 months. Child had been previously healthy. Had been breast fed for six months with supplementary bottle feedings. Child was perfectly regulated in a proper hygienic manner. During infancy had shown no manifestation of early rickets. There had been no previous acute illness. For several weeks previous to last illness the mother stated

that there had been some shortness of breath upon exertion.

Two days before seen, child had slight cough. A croupy cough, which had developed in the night, was the symptom which prompted the family to seek medical assistance.

Upon examination, the child was breathing somewhat rapidly, with no dyspnoea, color was normal, pulse good, temperature 101. Except for slight redness of throat, examination of heart, lungs and abdomen was negative. Examination for thymic dullness was not satisfactory, due to the crying of the child. During examination a dry croupy cough was heard. There was, however, no dyspnoea.

Eight hours later the mother reported no relief of croup, in spite of administration of usual remedies for croup. When seen at this time there was marked dyspnoea, pallor, slight, cyanosis of lips and finger tips, and retraction of ribs. Temperature was 102.5, which persisted until death.

Removed to City Hospital, where intubation was performed with some relief of symptoms. Thirty thousand units of diphtheria antitoxin were administered. Five or six hours later, because of increasing respiratory distress, tracheotomy was performed. Temporary relief followed. The following morning dyspnoea increased in spite of tracheotomy. Throughout, cyanosis was of moderate degree. Death thirty-six hours after the first sign of croup.

Three cultures, the last from the intubation tube after removal, failed to show the diphtheria bacillus. Autopsy one-half hour postmortem revealed a normal trachea and larynx, except for slight congestion of larynx probably produced by trauma of intubation. There was slight congestion in both lower lobes of the lungs, but no consolidation.

The thymus gland covered the entire upper portion of the pericardium and extended upward, enveloping the trachea on either side. Weight of gland 21 grams, all surrounding tissue having been removed before weighing.

The outstanding features of this case were the obstructive symptoms and moderate cyanosis. Considering the fact that tracheotomy failed to relieve the apparent obstruction at the only place where pressure upon the trachea could exist, namely, the superior opening of the

thorax, the elevated temperature and the toxic appearance of the child, it would seem quite probable that the symptoms were produced by the action of some toxic product, which existed itself upon the respiratory center in the medulla. In the diagnosis of thymus hypertrophy, as being the cause of the symptoms, spasmophilia and the accompanying laryngismus stridulus must be eliminated by electrical reactions and the absence of the Chvostek and Trousseau signs. Holding breath spells during fits of temper may be eliminated usually as the cause of symptoms by the Roentgen ray. Laryngeal diphtheria as a possible diagnosis in some cases must also be eliminated.

Briefly, the treatment consists in the application of radium to the thymus area for a period of from seven to ten hours.

X-ray treatment may be used, weekly exposures being used over a period of from ten to fourteen weeks, having been advised. The advantage of radium in the treatment of this condition lies in the ease of application, the rapidity of its action and the fact that only one treatment is necessary. Furthermore, radium may be applied with very little discomfort to the child.

Thymus gland disease is not as rare as might be supposed. Doubtless most of the sudden deaths in infancy commonly attributed to suffocation or "heart failure," are due to a hypertrophied thymus gland. Much study of this condition is necessary, but it must not be forgotten that many slight symptoms in the first two years of life, such as "blue spells," rapid breathing, and suffocative attacks, often overlooked, may be due to thymus hypertrophy.

*Blackfan and Little, *American Journal of Diseases of Children*, November, 1921. Vol. 22, No. 5.

†Brayton and Heublein, *Boston Medical and Surgical Journal*. Vol. CLXXXI., No. 26. December 25, 1919.

§*Journal Medical Research*, 1910. XXII., 1.

"WHAT CAN BE DONE FOR THE DEAF IN RHODE ISLAND."*

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In the City of Providence there are six schools devoted to instruction of tubercular children, each

*Read before the Rhode Island Medical Society, December 1, 1921.

receiving twenty pupils—in all, one hundred and twenty. There are enrolled one hundred and fifty-eight pupils whose deafness prevents them receiving complete or full instruction at the public schools and no provision is made for their betterment, save to refer them to the R. I. School for the Deaf and but a small proportion avail themselves of its aid.

My interest in this subject has been increased by a knowledge of the work done by a teacher of lip reading in this city, Miss Durfee, who though handicapped by serious deafness has already the nucleus of an organization for which I appeal and I am privileged to read her plea for the assistance of the R. I. Medical Society, in the formation of a league.

In its psychological manifestation, deafness suffers chiefly from what it misses—the voice of human companionship, music, nature, etc. There is none of the pain of chronic diseases. There is not the imprisonment of paralysis; there is not the isolation of tuberculosis. In deafness, it is not the body, but the mind which aches. The peculiarity of this condition lies in looking like a normal man, talking so, walking so, giving at first no evidence of abnormality, but being obliged to disclose an infirmity which immediately checks intercourse with other people. The consciousness that one is forever disappointing strangers, who are disposed to be sociable, forever imposing inconveniences upon friends, is a distinct and distressing psychological characteristic of deafness and the morbid shyness which follows, develops from it. They grow ashamed of themselves. They blush for their apparent stupidity, all of the time resentfully feeling that they are not stupid. In its natural raw state, deafness is a nerve-racking series of humiliations and blunders,—nerve-racking not only for the deaf person, but for everyone with whom he comes in contact. The problem is, how to reduce this to its lowest terms.

There have been many movements in the country for the betterment of the life and conditions of various classes and such movements have always begun in a small way. Then the public have gradually been impressed with the work and its aim and finally the city or state being obliged to recognize the needs of it, and the formation of various commissions have resulted.

In 1911 the late Mr. Edward B. Nitchie of New York conceived the idea of forming a club to assist the hard-of-hearing. The need of such an

association was brought home to him by a man, deaf and despondent, for whom he had tried in vain to find employment. After being told that nothing could be found for him, the man, in desperation, remarked on leaving, "If you never hear from me again, you will know what has become of me." Mr. Nitchie never saw him again, but he never forgot him. The league was the result.

At first it had the character of an alumni association; but at the end of the first year it had become so well established that incorporation was imperative. Two years later Dr. Harold M. Hays of New York was chosen president and the eight years of his presidency have shown amazing results. In the ten years of its existence the league has: First, established lip reading for adults in the public schools. Second, it has gained the co-operation of leaders in civic movements, and federal bodies, of social workers and business organizations. Third, it has won the co-operation of the Section on Otolaryngology in the N. Y. Academy of Medicine. Fourth, it has carried on propaganda for new organizations, before the American Association for the Hard-of-Hearing was organized, and it has assisted young organizations to develop. Fifth, it has operated a Community Center for the deafened, serving people in every walk of life, and providing day and evening activities as follows: In the line of education it has established free lip reading classes, study clubs, and other meetings, it has had the Auditorium equipped with hearing devices for lectures, etc. In the line of vocational training it has established a free bureau for employment and it has given assistance in obtaining proper vocational training. In the line of recreation and general welfare it has given dramatics, dances, moving pictures, game and card parties, outings and entertainments. In special cases it has given free aural examination. It has established a Thrift Shop, and given advice about hearing devices. It has established a Young People's Class, Woman's Club and a Men's Club. In the line of industry, it has opened a handiwork shop for the marketing of work of the deafened man and woman and opened the mending and sewing department, where mending can be done at the League or in your home.

Altogether, it has been so successful that it has been visited and studied by social workers.

The old idea of group betterment was that the

group could best be assisted from without. Results have shown, however, that the richest benefits are obtained when the group is allowed to organize and operate as it best sees fit. In this way there is formed a distinct feeling of fellowship; and the spirit of charity is almost entirely lacking.

The newly incorporated American Association for the Hard-of-Hearing brings together, for the first time, the chain of centers that have developed all over the United States from Mr. Nitchie's school. Before this association was incorporated there were but five such centers. At the present time Dr. Wendell Phillips of New York is president. His personal experience in observing the wonderful results have led him to become a missionary of social service with a desire to see its beneficent propaganda carried on to the ends of the earth. This personal experience, whereby he, as an otologist, instead of telling his deafened patients the bold facts that no hope may be expected for improvement in the fast fading hearing functions, may now hold out the hand of hope that lip-reading, congenial occupation, social education, and sympathetic companionship may be reached *directly*, has given him a new viewpoint and furnished a happy solution to a most difficult problem.

From the viewpoint of the patient, I can but quote the following letter sent by a young man, 19 years of age, to his otologist eighteen months after he had been referred to the League—"In order to bring out more clearly the work of the League and its effect upon me, it becomes necessary to relate a little part of my life's story before I came into contact with the N. Y. League for the Hard-of-Hearing. My early boyhood consisted of the usual excitement and diversions, such as befall all the average city youngsters. Life was one long stretch of fun, joyousness and happiness. This continued until I noticed that it was becoming difficult for me to get everything that was spoken. I had just been graduated from the public school and had entered high school. My high school life was one long struggle. Because of my deafness I did not mingle much with the fellows in my classes. I did not join any social or scholastic club in the school. I kept to myself, never asked for advice or consulted any of the teachers. I did not go out into society or mix with other people. My entire time was devoted to reading.

I refused to go to college, as I was afraid—afraid to go through the same life in college as in high school. About this time I visited Dr. Phillips, who recommended me to the League. As Dr. Phillips had advised me to join a lip-reading class as soon as possible, I decided to attend the one held at the League rooms at night. I came full of hopes, for I had been told that lip-reading was a most wonderful thing for the deafened. I expected that I would be able to learn the entire art of lip-reading at one lesson. But my hopes were dashed to pieces! I couldn't grasp a word that was said. All around me the people were nodding their heads in the affirmative or negative, as the case might be, at times they would burst out in laughter at something that the teacher had said. I sat there all alone, watching them and cursing myself. I found out that it was not so bad after all. That a person who was deaf did not have to isolate himself from the world. I began to laugh and joke and look the world in the eye. At the present time, I have accomplished a great deal in lip-reading and am in the intermediate class. I visited the Men's Club one Saturday night and was impressed by the spirit that pervaded the room. I have taken part in three out of the four amateur dramatics given for the enjoyment of the League members. As I had always wanted to learn how to dance, I joined the dancing class. In fact, my entire life has been changed by the influence of the League."

In Providence the movement is small as yet, and the public has not yet been sufficiently impressed to demand civic or State recognition. With your assistance, this condition could, I think, be easily remedied. It would help a great deal if you told your patients how much such a center would help them, for if such an organization were effected, backed by your influence, they could easily demand civic aid. Therefore, I make the following resolution:

Whereas, the Rhode Island Medical Society, recognizing the fact that many cases of increasing deafness are not susceptible of relief by remedial measures, and, *whereas*, adults afflicted with deafness are handicapped in their efforts to secure a livelihood and children prevented from acquiring the education to which they are entitled, and, *whereas*, the measures for the amelioration and betterment of this unfortunate class are inadequate and not at all commensurate with the relief

afforded the tubercular, the feeble-minded or the blind, *Resolved*, that the R. I. Medical Society affirm its interest in the welfare of the chronic deaf by the appointment of a committee of three who are to be named by the President of the Society, and such committee are requested to invite a representative of the department of public schools, the R. I. School for the Deaf, a social worker and Miss Durfee to form with them a committee for the consideration of this subject. *Resolved*, that this committee shall, if in their opinion it shall be advisable, have the power to inaugurate a Providence League for the Hard-of-Hearing, with the sanction of this Society and that they shall report to the Society the result of their action.

[This resolution has already appeared in the transactions of RHODE ISLAND MEDICAL SOCIETY; we are, however, owing to its importance, again giving it space as a part of this article.—Ed.]

DISCUSSION OF DR. ROGERS' PAPER BY MISS MARION DURFEE OF PROVIDENCE, A TEACHER OF THE DEAF.

"Before giving my illustrations I should like to say that it has been asked of me, 'Who should study lip reading?' There are two classes of deaf, the congenitally deaf and those who become deaf after birth. You probably all agree that lip reading is something that the congenitally deaf should have, but if those who are slightly deaf would take up lip reading before they become totally deaf they would be able to so co-ordinate hearing and sight that lip reading would be comparatively easy to master. It gives the partially deaf person more self-confidence in himself and the nervous strain is greatly reduced.

"Can anyone become a lip reader?" Barring the feeble-minded and those with seriously impaired eyesight, there is no one who cannot get a great deal out of lip reading. But just as long as lip reading is an art and not a science there cannot be perfection.

"Our methods of teaching the two classes of deaf are totally different. The congenitally deaf is taught to read lips. The mind is an important factor in the field. Without the mind the reading of lips for practical purposes would not be pos-

sible. Lip reading is a hard task. The rapidity of movement makes it almost impossible to grasp all that is said by the aid of the eyes alone. Therefore, we train the mind to catch what the eye cannot see; anticipate the thought which is coming, rather than to use only eyesight. The great difference in the teaching of these two classes can readily be shown."

Miss Durfee brought before the meeting two young women, one an advance pupil and the other simply a beginner; one but slightly hard of hearing, who could not read lips, the other totally deaf but a very good lip reader, and said that she wanted to show us how much better the person could get along in the world who could read lips.

The older woman, who had been deaf for 27 years, could barely hear when someone shouted in her ear only four inches away, but three feet away she heard and repeated a whisper that was inaudible to the audience. She has learned lip reading in one year; holds a responsible position; does her work; and enjoys the association of her fellow men.

The other woman, who could not read lips, could hear a story five feet away which was read loud enough for everyone in the hall to hear.

REMARKS OF ACCEPTANCE.

BY PRESIDENT N. DARRELL HARVEY.

Members of the Providence Medical Association: In accepting the office of President, to which you have elected me, I wish to extend my hearty thanks, feeling as I do, the honor which you have conferred by so doing. I am not unmindful of the fact that the duties of President of this Association are more than I realized when I consented to allow my name to be proposed. However, with the active co-operation of the Secretary and other officers, I am in hopes of getting programs that will meet with your approval and draw out a larger attendance at meetings. The standard which my worthy predecessor has established is one which I am afraid I cannot live up to, but I can assure you that I can make the best try, and if my shortcomings meet with disapproval I hope that you will be as merciful as possible.

THE RHODE ISLAND MEDICAL JOURNAL

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RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

GEORGE S. MATHEWS	<i>President</i>	Providence
FRANK E. PECKHAM	<i>1st Vice-President</i>	Providence
ARTHUR T. JONES	<i>2nd " "</i>	Providence
JAMES W. LEECH	<i>Secretary</i>	Providence
WINTHROP A. RISK	<i>Treasurer</i>	Providence

PAWTUCKET	
Meets the third Thursday in each month excepting July and August	
JOHN F. KENNEY	<i>President</i>
A. H. MERDINYAN	<i>Secretary</i>
Pawtucket	Pawtucket

PROVIDENCE	
Meets the first Monday in each month excepting July, August and September	
N. DARRELL HARVEY,	<i>President</i>
P. P. CHASE	<i>Secretary</i>
Providence	Providence

WASHINGTON	
Meets the second Thursday in January, April, July and October	
ASA S. BRIGGS	<i>President</i>
W. A. HILLARD	<i>Secretary</i>
Ashaway	Westerly

WOONSOCKET	
Meets the second Thursday in each month excepting July and August	
EDGAR F. HAMLIN	<i>President</i>
A. H. MONTY	<i>Secretary</i>
Slatersville	Woonsocket

DISTRICT SOCIETIES

KENT

Meets the second Thursday in each month

J. F. ARCHAMBAULT	<i>President</i>	Arctic
DANIEL S. HARROP	<i>Secretary</i>	Riverpoint

NEWPORT

Meets the third Thursday in each month

NORMAN M. MACLEOD	<i>President</i>	Newport
A. CHACE SANFORD	<i>Secretary</i>	Newport

Section on Medicine—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.

R. I. Ophthalmological and Otolological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. C. J. Astle, President; Dr. J. L. Dowling, Secretary-Treasurer.

The R. I. Medico-Legal Society—4th Thursday—January, April, July and October. Dr. Roswell S. Wilcox, President; Dr. H. S. Flynn, Secretary-Treasurer.

EDITORIALS

DR. H. R. STORER.

It is with a feeling of gratified complacency that we append herewith certain quotations appearing in the daily papers of Newport, having to do with a member of our State Medical Society.

"In the recent death of Lord James Brice, an indirect and very slight tie between Newport and Scotland has just been broken. The Edinburgh University Club of North America has had four

vice-presidents, who were elected simultaneously: James Bryce, the former ambassador; Mr. Choate of New York, with his LL.D. from the University; Sir James Grant of Ottawa, and Dr. H. R. Storer of this city."

Coincident with above is the following:

"Dr. Horatio R. Storer received yesterday a telegram that had been filed in Providence the evening before by the secretary of the Harvard Club of Rhode Island. The club was having its annual dinner and references having been made to Dr. Storer, it was voted to send him a congratulatory message. It read as follows:

"Providence, R. I., January 16, 1922.

"Dr. Horatio R. Storer, 58 Washington Street, Newport, R. I.

"The members of the Harvard Club of Rhode Island assembled tonight for their annual dinner extend their heartiest congratulations and good wishes to Harvard's oldest living graduate. Paul A. Merriman, Secretary."

THE RHODE ISLAND MEDICAL JOURNAL takes occasion also to felicitate Dr. Storer and to commend these complimentary considerations to one who has been so long an honored member of the Society and of the community in which he has long served.

DO THE CHIROPRACTORS PRACTICE MEDICINE?

In the hearing held during the last legislative session concerning a bill that would establish a special board to license chiropractors in this state, one of the supporters of this measure, who was a professor in one of the chiropractic schools, contended that the chiropractors should not come under the State Board of Health because chiropractic was not the practice of medicine. He asserted that Palmer, who introduced chiropractic, had discovered an entirely new science that was absolutely different from the practice of medicine.

Many courts have passed on this question and a recent decision in Colorado is typical. "The defendant—a chiropractor—assumed that 'the practice of medicine' means the practice of administering drugs and nothing more. With this contention the court is unable to agree. 'Medicine' as herein used is properly defined as the art of healing."

That they make a diagnosis is proven by their own literature which they distribute with a lavish hand. In a pamphlet entitled "Pulmonary Tuberculosis," written by one J. N. Firth, D.C., Ph.C., a professor in the Palmer school, is the following: "In pulmonary tuberculosis the vertebral subluxation is invariably found in the region of the third dorsal vertebra, and tenderness can be traced outward over the course of these nerves."

Another claim made by the supporters of chiropractic is that the various boards of medical examiners are so constituted as to protect the medical profession. That this is not so is proven by a recent decision of the Utah Supreme Court.

"The right given to the board of medical examiners is not for the benefit or protection of the members of the medical fraternity, but rather for the creation of a method of procedure to protect the health of the community."

STABILIZE POST-WAR MENTALITY.

In any great crisis there will be a certain percentage of individuals whose mental equipoise will be disturbed by the intense emotional and physical stress incident thereto. And the larger number of soldiers—between three and four thousand at present—whose reactions to normal society have been disturbed by their war experiences, was not unexpected by those who in civil life have come in contact with similar, though less frequently seen, cases.

The proper care of these mentally disabled soldiers has been for a long time a matter of concern to many people and especially to physicians, who feel that much could be done by proper measures to rehabilitate these unfortunates. Their present unhappy condition in too many instances, threatens to become a stench in the nostrils of the nation, unless prompt and efficient measures are instituted, which will place these sick men in hospitals especially equipped and staffed for the treatment of such cases. They are, in truth, wards of the nation and should be given the care and attention by the country, at least commensurate with the great sacrifices they made in arms. No stigma should attach to them, no slightest suggestion of pauperism be a possible factor in retarding their slow return to mental and bodily health. The physicians of this community will, therefore, welcome and give support to the suggestion that the Naval Hospital at Newport be constituted as an institution solely for this type of sick ex-service men. Fortunately for the families of these unfortunates in Rhode Island, distances are not great and such a hospital will be as easily accessible as in a more central city.

"LETTER TO THE EDITOR."

Upon another page of the JOURNAL there appears a letter bearing the above caption, the careful perusal of which is recommended to our readers.

Not only does it embrace the logic of a sound social and economic principle, but it is also indicative of a great sentiment of Christianity vital to our civilization.

A discussion through these columns of this letter or of points raised therein is invited.

LETTER TO THE EDITOR

To the Editor,

Rhode Island Medical Journal,

Providence, R. I.

Dear Sir:

In the issue of January, 1922, of the RHODE ISLAND MEDICAL JOURNAL, an editorial appears under the heading, "Expanded Lying-In Service for Providence." The paragraph on page 184 interests me greatly, and I hereby quote the same. "But there is one service which the Providence Lying-In Hospital does not furnish and a field of work which it should enter: the supervision and delivery of mothers of poor families who do not care to go to the hospital *or who for some reason cannot.*"

Those "who for some reason cannot," are the ones whom I desire to call to your attention. We understand that one of the rules of the Lying-in-Hospital is that no unmarried girl who has had a second child is eligible to the service there. The idea, we presume, of the founders was to take in only the unfortunate girl who had previously lived a righteous life, and that such aid or shelter should not be given to those who were accounted vicious because they were second offenders. If those cases of the second transgression against the moral law were carefully looked into from the mental standpoint, we believe the Lying-In Hospital would in sympathy and charity take them in, for their mental condition is akin to that one who said, "Tell me the story often, for I forget so soon."

If the Lying-in-Hospital could "expand" its service I am persuaded that many deserving cases would not come to the state institutions. I would call all those cases of mental indecision, deserving of all the sympathy and skill of a well-equipped Lying-in-Hospital, even though they have erred in judgment the second time and responded to the maternity impulse again.

In every case coming to my attention they are not alone to blame. Others more persuasive break down their defense which is already weakened by the primary transgression. In order that many children be saved the stigma of an almshouse, in my opinion, it would be advisable that the cities should have a maternity ward attached to their hospitals where these young mothers could go voluntarily on the recommendation of the family phy-

sician. In this way could the stigma of state institution admission and control be lessened.

There is happily a growing sentiment and statistics to prove that the mother of repeated offense is not altogether a lost sister, and should not be turned down and out, but saved. This is not altogether sentiment, it would be in my opinion constructive efforts toward better citizenship, for if a young woman's will power is strengthened by encouragement and kindness, she will be more inclined to receive and act upon the Master's advice, to "Go and sin no more."

With the social service operating as it does in nearly all hospitals, the after care of this young mother and child would fall into their hands, for they would find that relatives and parents would respond and forgive quicker if less shame was attached to the transgression, and apparently they would think less of it, than if mother and child had to go through the Overseer of the Poor and through him to the state institutions. The main principle of any charitable organization is "to help" and "to heal," and to forgive, and if in some way the Lying-in-Hospitals could "expand" their service to take in many of these cases of repeated maternal impulses, a state-wide benefit would result, and, in my opinion, many a young mother would have the incentive to become stronger against temptation because she would be inspired by that "Hope which springs eternal in the human breast."

Sincerely

HENRY A. JONES, M.D.

OBITUARY.

DR. JOSEPH MACDONALD.

Dr. Joseph MacDonald, managing editor and publisher of *The American Journal of Surgery*, and co-publisher of *The Medical Pickwick*, died suddenly in his office on January 7th of cerebral hemorrhage, at the age of 51.

Dr. MacDonald was born in Branchville, Sussex County, New Jersey, in 1870. All his adult years were spent in medical journalism. He rose from office boy to manager in the office of the *International Journal of Surgery*. In 1905—meanwhile having received his degree in medicine—he resigned from that position to establish the Surgery Publishing Co. and the *American Journal of Surgery* (formerly the *American Jour-*

nal of Surgery and Gynecology). From the outset he associated with himself a New York surgeon, Dr. Walter M. Brickner, as the editor-in-chief, and the journal early acquired esteem through the high standard of literary critique it has maintained. In 1915, in association with Dr. Sol Martin of St. Louis, Dr. MacDonald established the *Medical Pickwick*—a monthly magazine of medical wit, humor, verse, history and biography.

Dr. MacDonald was ex-president and, for many years, secretary of the American Medical Editors' Association, an organization in which he was deeply interested and in whose affairs he was an active and earnest factor.

An officer in the Medical Reserve Corps of the U. S. Army since 1909, upon our entrance into the war he was commissioned a captain and, in December, 1917, a major. Long before he was assigned to active duty, and continuously thereafter, he did great service to his country by conducting in his own publications and in member journals of the American Medical Editors' Association, a very vigorous propaganda to stimulate physicians throughout the country to enter the military service. With the approval and assistance of Surgeon General Gorgas, he prepared circulars and editorials setting forth the medical-officer needs of the growing U. S. Army, and striking epigrams and exhortations to stir the conscience of laggard colleagues. During 1918 he was on active duty as a member, and then chairman, of the Army Medical Examining Board of New Jersey, and made an excellent record in the number of physicians he inducted into the service. Later he was appointed a member of the General Medical Board at Washington.

Dr. MacDonald was very active in Masonry and was Past Grand Commander of Knights Templar of the state of New Jersey.

A few months after his discharge from the army in 1919, Dr. MacDonald suffered a cerebral hemorrhage, causing a hemiplegia, from which he recovered largely by dint of plucky perseverance—a characteristic that dominated all his activities. He was a hard worker and extremely energetic. Indeed, the arterial hypertension from which he died was, largely, a sacrifice to his overzeal. He was always genial, frank and optimistic.

Dr. MacDonald had a very "magnetic" personality. He had a host of friends, within and with-

out his profession, who will mourn his early death.

He is survived by a wife and sister, Mrs. W. C. McKeeby, wife of Dr. McKeeby of Syracuse, N. Y.

CASE REPORT

REPORT OF A CASE OF COMPOUND FRACTURE OF THE RIGHT FOREARM.

BY CHARLES O. COOKE, A.M., M.D.

The patient, J. S., age thirty-nine, by occupation a rubber worker, caught his right forearm in a rolling machine on January 23, 1922, and was immediately removed to the Rhode Island Hospital.

The patient's general physical examination was negative. Examination of the right forearm showed an extensive laceration of the forearm. The skin was torn nearly off the arm. The ends of the radius and ulna were protruding from the wound. The radial artery and vein were severed. There was sensation and slight motion of the fingers.

The patient was given ether and an attempt made to save the arm. An incision was made on the inner side of the arm over the site of the fracture in the ulna and a metal bone-plate applied. A similar plate was then placed on the radius. The skin was sutured loosely and six Dakin's tubes inserted. These tubes were injected with Dakin's solution every two hours. This was kept up for six days, when the discoloration and swelling of the upper arm made it necessary to stop it.

The arm has continued to improve; the circulation is good; and there is every indication that the arm will be saved.

BY DR. WILLIAM B. CUTTS.

The patient was a woman, unmarried, age 31. She entered the R. I. Hospital on Sept. 30, 1909. Her previous history was that she was at the Out-Patient Department for two months previous to entrance to the Hospital for an abscess of the abdominal wall. She had been receiving dressings but had had no operation in the Out-Patient Department. On this particular day she fainted while being dressed, and it was thought advisable to send her to the Hospital. On entrance to the Hospital her physical examination was negative except for a sinus just below the umbilicus, which

was packed with gauze. Three or four days later, while doing the dressing of the patient in the ward, a small dark object was seen protruding from the bottom of the sinus in the abdominal wall. This had the appearance of the head of a snake. It was grasped with a French clamp, pulled out, and found it to be a gum-elastic catheter which appeared to have been retained for some time. On inquiring further into the patient's history it was found that about six months previous, or a little over, an abortion had been performed by means of a catheter. After removing this foreign body the wound was dressed and the patient went on and made an uneventful recovery without further surgical attention. The discharge from the sinus grew less, and she was discharged on October 12, 1909. The catheter has been preserved and has been in my possession since that time.

SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION.

January 2, 1922.

The annual meeting of the Providence Medical Association was called to order by President Frank T. Fulton at 9:05 P. M. on January 2, 1922.

The records of the previous meeting were read and approved.

The reports of the Secretary, Treasurer, Standing Committee and Reading Room Committee were read and accepted, and ordered placed on file.

The President's annual address, read by Dr. Fulton, was a paper on Endocrine Glands. He spoke of the existing knowledge of the actions of different members of this group and of the conflicting evidence of observers as to the results of treatment, deprecating the ill-judged enthusiasms of some clinicians which are not borne out by the observations of physiologists.

In accordance with Article I, Section 6, of the By-Laws, the Standing Committee presented the following nominations for officers and committees for the year 1922:

For President—N. Darrell Harvey, M.D.; for Vice-President—William B. Cutts, M.D.; for Secretary—Peter Pineo Chase, M.D.; for Treasurer—Charles F. Deacon, M.D.

For Member of the Standing Committee for Five Years—Frank T. Fulton, M.D.

For Trustee of the Rhode Island Medical Li-

brary Building for One Year—Herbert G. Partridge, M.D.

For Reading Room Committee—G. S. Mathews, M.D., M. B. Milan, M.D., H. A. Cooke, M.D.

For Delegates to the House of Delegates of Rhode Island Medical Society—F. N. Brown, M.D., J. B. McKenna, M.D., F. G. Phillips, M.D., G. T. Spicer, M.D., C. A. McDonald, M.D., J. B. Ferguson, M.D., Herbert E. Harris, M.D., Bertram H. Buxton, M.D., Peter P. Chase, M.D., Ira H. Noyes, M.D., J. P. Cooney, M.D., G. A. Matteson, M.D., J. E. Donley, M.D., Prescott T. Hill, M.D., Wm. P. Buffum, Jr., M.D., George R. Barden, M.D.

It was moved and seconded that the by-laws be suspended and the Secretary instructed to cast one ballot for their election.

Dr. Harvey was escorted to the chair by Drs. Matteson and Partridge, and the new President made a short address and appointed on the Collation Committee—Wm. P. Buffum, Jr., M.D., Frank H. Mathews, M.D.

Publicity Committee—William O. Rice, M.D., F. V. Hussey, M.D., R. G. Bugbee, M.D.

The Standing Committee having approved the following applications for membership: Nathan A. Bolotow, M.D., Caroline M. Cassidy, M.D., Mihran A. Chaprasdian, M.D., Arthur E. Martin, M.D., the secretary was empowered to cast one ballot for their election.

The report of the Standing Committee advocating the raising of the yearly dues from \$4.00 to \$5.00 was read and it was voted that the dues be made \$5.00. One hundred and seventy-five dollars was appropriated for the Reading Room for the ensuing year. Three hundred dollars was appropriated for the Building Fund of the Medical Library for the ensuing year.

A letter from Dr. Eric Stone was read, presenting a resolution advocating the passage of legislation to limit the hours of night work for women in certain industries in the state of Rhode Island. Dr. Stone spoke, giving some statistics regarding the effect and harm of women by night work. Drs. C. A. McDonald and A. C. Ventrone discussed the matter. It was referred to the Standing Committee for a report.

The meeting adjourned at 10:40 P. M.

Attendance, forty-seven members.

Collation followed.

Respectfully submitted

PETER PINEO CHASE, M.D., *Secretary*

SECTION IN MEDICINE.

The regular meeting of the Section in Medicine was held in the Medical Library Tuesday evening, January 24th, at 8:30 P. M., Dr. Charles A. McDonald presiding. The speaker of the evening was Dr. Paul White of the Massachusetts General Hospital, who gave a very interesting "Talk on the Heart." Dr. White's paper was discussed by Drs. Mathews, Perkins and Fulton. Members of the R. I. Medical Society who are interested in medicine, will do well to join this Section; these meetings are more than interesting, and the Chairman has promised us some very interesting talks for the present year.

CREIGHTON W. SKELTON, *Sec.-Treas.*

RHODE ISLAND OPHTHALMOLOGICAL AND
OTOLOGICAL SOCIETY.

The regular bi-monthly meeting of the Rhode Island Ophthalmological and Otological Society was held in the Rhode Island Medical Library February 9th at 8:30 o'clock.

The program of the evening consisted of a presentation of a case of Pemphigus of the conjunctiva, by Dr. Dowling; case reports of Retinitis Proliferans, by Dr. Raia; Capillary Hemorrhage, by Dr. Adams, and report of a case of intra-ocular foreign body, by Dr. Van Benschooten.

The meeting adjourned at 11 o'clock.

J. L. DOWLING, M.D., *Secretary*

WOONSOCKET DISTRICT MEDICAL SOCIETY.

A meeting of the Woonsocket District Medical Society was held at St. James Hotel, Woonsocket, on January 19, 1922.

Dr. Frank E. Peckham of Providence, R. I., gave an illustrated lecture on fractures. Collation followed.

A. H. MONTY, M.D., *Secretary*

MEDICO-LEGAL SOCIETY.

Regular quarterly meeting of the R. I. Medico-Legal Society was held at the Medical Library building January 26, 1922, at 5 P. M. President Roswell S. Wilcox, M.D., in the chair, 15 members present.

Minutes of the previous meeting were read and approved.

Report of the Treasurer, showing balance of \$185.16, was read and accepted.

Communications from the R. I. Civic Committee and from the Medical Advisory Committee were received, read by title, and on motion laid upon the table.

Application for membership from Mr. Davis G. Arnold of Providence, recommended by Mr. Littlefield, was received, and on ballot he was declared elected.

The President introduced Mr. Davis G. Arnold, the speaker of the evening, who gave a very pleasing talk on "Conditions in the Near East."

Adjournment at 6:30 P. M. Collation followed.

H. S. FLYNN, *Secretary*

NEWPORT DISTRICT SOCIETY.

The annual meeting of the Newport District Society was held December 16, 1921, and the following officers elected:

President—Norman M. MacLeod, M.D.; First Vice-President—Douglas P. A. Jacoby, M.D.; Second Vice-President—William S. Sherman, M.D.; Secretary—A. C. Sanford, M.D.; Treasurer—Maurice J. Butler, M.D.

NEWS ITEMS

The staff of the Newport Hospital had its regular monthly meeting on January 9, 1922, when the usual reports of the medical and surgical departments were read and discussed.

HOSPITALS

The annual meeting of the Staff Association was held on January 18th at the City Hospital. The officers chosen for the year 1922 were: President—Pearl Williams; Vice-President—Carl D. Sawyer, and Secretary—Harmon P. B. Jordan.

On February 1st, Dr. Wilford W. Barber and Dr. William Clem Cheney began a five months service. Both came directly from London, where they had completed a seven months service in pediatrics.

The regular monthly meeting of the Staff Association was held on Wednesday evening, February 15. The chief topic was a review of the patients and diseases treated in Ear, Nose and Throat, Ophthalmological and Dental Departments during the year 1921.

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ORIGINAL ARTICLES

THE RELATION OF FOCAL INFECTION TO DISEASES OF THE URINARY TRACT.*

HERMON C. BUMPUS, SECTION ON UROLOGY,
MAYO CLINIC, ROCHESTER, MINN.

The presence of oral sepsis in a large percentage of patients with urinary infections has suggested the possibility that such sepsis might be the focus from which the urinary infection originated. However, the presence of the colon bacillus in most chronic urinary infections and its absence in cultures from tonsils or abscessed teeth has made it difficult to explain the relationship between these two infections. The proximity of the colon to the kidneys and the apparently direct lymphatic connection between them has led many observers to believe that the focus from which urinary infections originate is in the colon rather than in the mouth. La Fur first suggested that the organisms which produce lesions in the kidney and later a colon bacilluria may be other than colon bacilli. He attempted to produce vesical ulceration in laboratory animals by the intravenous injection of various bacteria. The results were so unsatisfactory that the intravenous injection was abandoned and the organisms were injected directly into the bladder or into the perivesical space. Ten strains of bacteria, including the streptococcus, pneumococcus, colon bacillus, and so forth, were used. When the colon bacillus was injected it was recovered in pure culture; when other organisms were injected the colon bacillus was often recovered with the injected organism. In three cases the colon bacillus alone was recovered, even though a different organism had been injected in pure culture. This is suggestive evidence that the colon bacillus may be a secondary invader, and considered with a well-known fact that any disturbance in the urinary tract, such as the presence of a stone, stricture, or obstruction of the prostate is generally followed by a colon bacillus infection,

makes it seem credible that it may play a similar secondary part in other urinary infection. If the colon bacilluria is thus considered to be from a secondary infection the possibility of the primary hematogenous infection originating from some focus of oral sepsis is plausible.

Hunner's report of a new urinary disease gave added support to this theory of urinary infection. The disease he described is an interesting pathologic and clinical entity. It occurs usually in women, although cases in men have been reported. The patient complains of severe and frequent dysuria which often compels him to void every fifteen minutes, day and night. These symptoms are associated with knife-like pain in one or the other lower quadrants always aggravated by motion. Occasionally blood is found in the urine, grossly or microscopically, for a short period. Notwithstanding the severe symptoms the urine is negative microscopically and the most painstaking cystoscopic examination reveals but a small blanched area of mucous membrane surrounded by some edema and redness. Hunner called the condition "elusive bladder ulcer." Pathologic examination, however, shows this term to be a misnomer, as there is no break in the mucous membrane, and the entire disease process occurs below the mucous membrane in the wall of the bladder. Here are tissue changes indicative of a blood borne infection. The blood vessels are prominent; polymorphonuclear leucocytes, lymphocytes and extravasated red blood cells are found infiltrating the vessel walls and perivesical tissues. There is marked increase in fibrous tissue and fibroblasts, the blanched area on the mucous membrane being a cicatrix which, if the bladder is over-distended, may crack and bleed. If proof were obtainable that the condition resulted from infection brought through the blood stream, then it would be conceivable that similar infecting organisms might, under somewhat different circumstances, lodge in the mucous membrane and instead of the pathologic changes occurring entirely in the bladder wall with a resulting solitary ulcer of the bladder, the mucous membrane would be involved, and a solitary ulcer of the bladder would result. The cause

*Read before the Rhode Island State Medical Society, March 2, 1922.

of such ulcers has long puzzled urologists. Similarly, the infecting organisms might lodge more diffusely, rather than in a single area, and cause diffuse cystitis of unknown origin. Such cystitis is now considered to be secondary to pyelonephritis which has subsided. The kidneys in such cases, however, do not exhibit evidence of former disease. Their function and the pyelograms are normal and the urine from the ureteral catheters is sterile. It has always been difficult to understand why they, the more vulnerable organs, should recover and the bladder remain involved. If it is assumed that the infection in such cases is hematogenous this difficulty is overcome.

If the theory of hematogenous infection of the urinary tract were correct, then infected tonsils and abscessed teeth might be the focus from which many of the infections arise. In an endeavor to prove this theory which had so much clinical coincidence, investigations were made as follows:

Patients with idiopathic cystitis, submucous ulcer of the bladder, as described by Hunner, or solitary ulcers of the bladder were carefully examined for possible foci of infection such as septic teeth or tonsils. The examination of the teeth included roentgenograms to demonstrate the presence of apical abscesses and devitalized teeth, and careful examination by means of the pulp tester to ascertain their viability. This was done because in making routine cultures of extracted teeth we have found that pure cultures of a green-producing streptococcus may be isolated at the apices of dead teeth even when the roentgenograms do not show evidence of periapical infection. It is not generally appreciated that there may be a vast number of organisms around a devitalized tooth before enough bone is destroyed to make their presence manifest in the roentgenogram. It is a mistake to exclude the teeth as a possible focus of infection simply because apical abscesses are not demonstrable by the roentgen-ray. When such evidence of infection was found, the teeth and tonsils were removed and cultures were made.

In cultures obtained from the extracted teeth green-producing streptococci were always isolated, while from the tonsils more varied flora were obtained which, however, always included green-producing streptococci.

Rabbits were injected intravenously with from 3 to 5 c. c. of such cultures. In order to be cer-

tain that selective localization of these bacteria was not due to their incubation in artificial mediums or to an overwhelming dosage resulting from increase in numbers, salt solution suspensions of tonsillar tissue were injected without incubation in several cases. In order to ascertain that the colon bacilli in the urine of patients did not also possess specificity for renal tissues, pure cultures made from the urine of patients prior to the eradication of their foci were injected intravenously into rabbits, and necropsies performed. In none of the animals could lesions of the kidney be demonstrated. But of nineteen injected with primary cultures from the teeth and tonsils, sixteen developed lesions in the urinary tract, thirteen of which were in the bladder. The animals were examined usually from three to six days after inoculation. Cultures were made routinely not only from the lesions, but from the blood, bile, urine, joint fluid, and spleen. In a number of cases the cultures thus recovered were again injected into other animals and produced like lesions of the kidney. In some cases a third animal passage was made.

Following the extraction of suspected foci patients usually experience acute exacerbations of urinary symptoms, accompanied by chills more or less severe, and rapid rise of temperature. We have regarded such reactions as clinical manifestations of the specificity of the bacteria released from the removed focus, and believe that the increased severity of the disease should be considered favorably and as indication that the right focus has been eliminated. The correctness of this supposition was enhanced by the fact that prior to the eradication of the suspected foci only colon bacilli were obtained from the urine cultures, and that following the eradication of the foci streptococci appeared for a time. Specimens of these mixed cultures containing both colon bacilli and streptococci were injected intravenously into rabbits and lesions of the urinary tract occurred; when the colon bacilli alone were injected lesions did not occur.

It seems certain that the marked affinity of these strains for the urinary tract is significant and not accidental because only ten animals developed lesions in the urinary tract following injection of 239 animals under the same conditions with streptococci from infected teeth and tonsils of patients having diseases other than urinary.

The bladders of the animals were usually contracted, the walls edematous, and the vessels markedly injected. Scattered throughout the bladder walls were numerous hemorrhagic lesions involving the submucous tissue and the mucous membrane. These varied in size from small punctate areas to lesions that were from 3 to 4 mm. in diameter. There were large numbers of polymorphonuclear and mononuclear leukocytes in the submucosa and around the dilated blood vessels. Sections stained by Gram's method revealed many gram-positive diplococci, either singly or in groups. Many of the leukocytes contained diplococci in various stages of digestion.

Two of the patients with submucous ulcers of the bladder were operated on, and examinations of the specimens made. The microscopic picture was about the same in both. In the submucosa where the most extensive changes took place were many large and small areas of round-cell infiltration, as well as many newly formed blood vessels. The muscular coats were somewhat edematous, but with very little round-cell infiltration. The peritoneal coat was slightly thickened. A prolonged search of carefully stained sections from the ulcers demonstrated undoubted diplococci within the lesions.

We believe that finding these streptococci in the excised ulcers and our experimental work demonstrated that submucous ulcers and other infections of the urinary bladder may be due to focal infections harboring streptococci which have a selective affinity for the urinary tract.

Having obtained such suggestive results with this first small series of patients in which the clinical evidence had for so long pointed toward a focal infection as the cause, we decided to repeat the experiments in a larger series of patients with pyelonephritis, a disease in which the focal origin was doubtful.

The twelve patients with pyelonephritis, from whose septic teeth or tonsils we obtained cultures, had symptoms of the usual type of the disease. The duration of symptoms varied greatly. The shortest was three weeks following an attack of tonsillitis; the longest eight years following the devitalization of four teeth. In three of the patients tonsillitis and "grippe" were considered possible etiologic factors. In seven the clinical his-

tories gave no suggestion of the source of the infection. All of the patients were cystoscoped, and the urine from the kidneys found to be infected. Cultures were made from teeth and tonsils, and twelve strains of bacteria were injected into fifty-three rabbits, forty-five of which showed lesions in the kidneys at necropsy. Extra-urinary lesions occurred as follows: eight in the muscles; eight in the joints; four in the stomach; three in the heart; and one in the gallbladder. These were relatively slight as compared to those in the urinary tract.

The catheterized urine from the rabbits was normal before injection; after injection a small amount of albumin with relatively few erythrocytes and epithelial cells, and a larger number of leukocytes were usually present.

The kidneys of the animals were about normal in size, or slightly swollen. In no instance was there a picture of diffuse parenchymatous nephritis, but always of localized infection. The capsule stripped readily in all. The cortex often presented small, opaque, yellowish white areas, and on section the cut surface often revealed marked swelling and edema, especially of the medulla, sometimes associated with areas of hemorrhage varying in size from 1 to 4 mm. Varying numbers of necrotic areas were found in the medulla, some so small they were scarcely visible, others large grayish-white streaks, necrotic-like in appearance, and gradually disappearing as they approached the cortex. These areas were surrounded by zones of congestion and hemorrhage. In one instance only was a hemorrhagic lesion found in the ureter.

On microscopic examination evidence of diffuse nephritis was not found. The glomeruli were almost wholly free from lesions other than varying degrees of congestion. The necrotic areas showed marked destruction of the epithelium and marked leukocytic infiltration. The parenchymatous cells immediately surrounding these areas were often granular and swollen, and the nuclei of many failed to take the stain. Sections stained by Gram's method contained varying numbers of gram-positive diplococci, singly, in groups, or in short chains. The leukocytes often contained many diplococci in various stages of digestion, depending on the duration of the experiments.

Report of a Typical Case.

Case A344,376. Mrs. M. H., aged forty-five years, came to the Clinic complaining of bladder trouble. Three weeks before, at the onset of her menstrual period, she had noticed a slight irritation at the neck of the bladder and burning at the end of urination. Two or three days before she had stayed up all night with a daughter who was suffering with tonsillitis. She had become chilled and had had a sore throat for the next few days. The bladder trouble had grown gradually worse, and she called the local physician who attended her for the next two weeks, during which time her temperature ranged from 99 to 104.5; the night before she came to the Clinic it was 104.5. She complained very little of pain except at the end of urination; she felt a slight soreness around the crest of the right ilium. A cystoscopic examination had been made two days before, and the inflammation was found around the right urethral orifice. Colon bacilli were recovered from the urine. A diagnosis was made of mild cystitis.

Examination revealed some slight tenderness in the left abdomen and over the crest of the right ilium. The temperature was 101. Four teeth revealed evidence of periapical infection in the roentgenograms, one was devitalized, but the roentgenogram was negative, and two had cavities of sufficient size to expose the pulps. From the tonsils, which were not greatly enlarged, fluid pus was expressed.

An occasional erythrocyte and a large amount of pus were found in the urine. Stained specimens were negative for tuberculosis bacilli. Roentgenograms of the urinary tract were negative. Two cystoscopic examinations, made before the suspected foci were removed, showed that the bladder was negative, but the urine recovered from the kidneys contained pus and gave a pure culture of gram-negative bacilli. Three rabbits were injected with cultures of these bacilli and in none could evidence of lesions be found. The day after the second cystoscopic examination two of the teeth with apical abscesses were removed, and cultures were made on blood-agar plates and in glucose-brain broth. In both green-producing streptococci were isolated on the blood-agar plates. A few colonies of staphylococci were also present. Three rabbits were injected; all had lesions of the kidney and one had multiple minute hemorrhages in

the right ureter near the pelvis of the kidney. Streptococci in pure culture were recovered from these lesions. The patient experienced no immediate reaction, as often occurs following the extraction of infected teeth, although for the next few days her temperature reached 101.

Six days later three more teeth were removed, including one which did not show evidence of apical infection in the roentgenogram, but it had been devitalized and the root canal was filled. All gave pure cultures of green-producing streptococci. These were injected into three rabbits resulting in lesions of the kidney in two, one of which had been injected with bacteria from the devitalized but otherwise negative tooth. The third rabbit did not have lesions. The day following the removal of the teeth the patient had a severe chill, and her temperature reached 106; profuse sweating and falling temperature followed. During this reaction a blood culture was taken and large numbers of green-producing streptococci were recovered. Two rabbits were injected intravenously with samples from this culture. Both developed lesions in the kidneys, and cultures made from the lesions yielded green-producing streptococci, while cultures from the gall-bladder, blood, spleen, liver, and so forth, were negative.

The febrile attack was so acute and severe that doubt was expressed with regard to its renal origin. The possibility of its being a respiratory infection was suggested, although there were no pulmonary symptoms. In order to clear this point cultures were injected directly into the trachea of five guinea pigs. At necropsy no pulmonary lesions were found, but in one guinea pig the kidneys and ureter were markedly involved.

Urine from the bladder the day of the chill, the day following, and on the fourth, day, contained only colon bacilli. On the fifth day, however, the patient was sufficiently recovered to permit of cystoscopy; the urine obtained from the kidney and bladder contained occasional streptococci, and colon bacilli in far greater numbers.

Samples of the mixed cultures were injected into five rabbits; three developed lesions of the kidneys. Streptococci and colon bacilli were recovered from the lesions in two rabbits; the three remaining had lesions in the intestines.

In order to study the relative ability of the two organisms to grow in urine, a twenty-four hour

sample of the patient's urine was autoclaved on three different occasions, and after being proved sterile samples were inoculated and incubated with bacilli, some with streptococci, and some with both. It was found that while the colon bacilli multiply readily the streptococci had no such ability and only a few more than were planted could be recovered. We believe that this explains the reason for the frequent absence of the etiologic organism in the urine of patients with pyelonephritis. Occasionally as in a case reported by Kretschmer, secondary colon bacillus infection does not occur, and streptococci are found in pure culture.

Eighteen days after the second extractions, the patient's remaining infected teeth were removed without incident. Pure cultures of streptococci were recovered. Four animals were injected; two developed lesions of the kidney, one very pronounced; one had lesions of the joints, and one of the muscles. Pure cultures of streptococci were recovered from all the lesions, the unaffected organs being sterile.

During the intervals between the extraction of her teeth the patient was cystoscoped four times, and at each examination pus cells were found in the urine from the kidney and cultures therefrom contained colon bacilli; a few streptococci were found also after the second extraction.

After all of the patient's infected teeth had been removed six cystoscopic examinations were made. The specimens of urine from the kidneys were free from pus, and on culture a gram-negative bacillus was the only organism found. Cultures made at each successive cystoscopic examination yielded fewer organisms; the last one, which was taken from the urine from the right kidney at the time of the patient's dismissal one month after the last of the septic teeth had been removed, contained only fifteen colonies on a blood-agar plate; cultures from the left kidney were negative.

During the time pus was found in the urine from the kidneys the pelvis was lavaged with a 1 per cent solution of silver nitrate, but after the disappearance of the pus following the extraction of the last teeth, only boric acid was employed.

A specimen of the patient's voided urine was brought to the Clinic one month after her dismissal. It was negative except for three pus cells to the microscopic field. Her physician stated that

she was free from symptoms, had had no fever, and was planning to return to the Clinic for tonsillectomy.

A summary of the results of this study shows that eighty-two rabbits were injected with strains of a green-producing streptococcus obtained from the teeth, tonsils, urine, and blood of patients suffering with pyelonephritis, and that in sixty-three of the animals lesions of the kidneys were found.

While this work was in progress Dr. Rosenow injected a sheep with a suspension of dead bacteria from one of our strains which had exhibited very marked elective localization, with the idea of producing an immune serum for therapeutic use. Injections were made bi-weekly for several months; when the sheep was killed, the kidneys were found to be filled with multiple fine calculi.

This at once centered attention on the production of renal calculi experimentally and suggested the possibility that failure in the past had been because a chronic focus had not been produced in the experimental animals. For it had been observed that experimental lesions such as have been described were often transitory and unless the animals were sacrificed on the third or fourth day after intravenous injection they might not be evident. To inject bacteria intravenously every two or three days as Dr. Rosenow had done in the case of the sheep was tedious and only partially simulated a chronic focus.

To overcome these difficulties it was decided to devitalize dogs' teeth and fill the root canals with the specific organisms. At this time one of the members of the staff had an attack of renal colic, the roentgenograms showed a ureteral calculus and his urine contained streptococci. As he had several abscessed and devitalized teeth, cultures were made from these and placed in the devitalized teeth of dogs. These animals had been previously examined roentgenographically to determine the absence of renal calculi, although their occurrence in dogs is extremely rare. After several weeks when the dogs were again examined by roentgen-ray, shadows were seen in the renal areas and at necropsy stones were found.

A similar experiment was conducted with cultures obtained from the teeth of a patient suffering with alkaline phosphatic cystitis, and at necropsy the animal's bladder was found covered with a phosphatic deposit.

As a result of our experiments we emphatically advise all patients suffering with urinary infections or calculi to have all possible foci of infection removed. As a rule little difficulty is experienced in persuading patients to lose abscessed teeth or demonstrably septic tonsils. However, when it is insisted that a devitalized but otherwise apparently sound tooth be removed greater opposition is met, especially if the patient's dentist is anxious to use the tooth in question for holding a bridge and can show the patient that there is no bony destruction around its root. It is equally difficult at times to insist on the removal of what appears to be negative tonsils, but it has been our experience that from both these sources bacteria as virulent and with as marked elective localizing power may be obtained as from the most septic tonsil or from the apical abscess of a tooth.

In closing I wish to call attention to the fact that from the removal of such foci too great clinical results must not be expected. As in advanced arthritis of the joints and so in badly diseased kidneys normal function cannot be restored simply because the original cause of the infection has been removed. It is rather in the early stages of the disease, and as a prophylactic measure that these experimental results are applicable.

DISCUSSION.

DR. ERIC STONE:

The treatment for the submucous ulcer has been operative removal of the ulcer bearing area or its destruction by the high frequency current. This treatment in the best hands has given a recurrence rate of about 60%. The demonstration of the etiology of the lesion as presented by Dr. Bumpus implies the necessity for change in the treatment in respect to the care of the focal lesion. Has the treatment at the Mayo Clinic been altered in regard to this?

DR. KERNEY:

I think it is very refreshing to hear some original work, as it is very difficult in Rhode Island to find the opportunity to do this type of work. Dr. Bumpus' paper is extremely interesting to me for the reason that I had the opportunity in 1913 and 1914 to work with Dr. Hunner jointly on some of these ulcer cases presenting these particular le-

sions. He had a great many of these cases come back afternoons to the clinic, and we made a great many observations through the female open cystoscope used by Dr. Kelley in most of his work. I believe from what Dr. Hunner told me at that time he felt that he was not gaining ground fast enough and the results from local treatment had not been up to his expectations, nor had the method of excision produced any marked improvement. Various local treatments were instituted, but at that particular time he was touching up the affected areas with 10% silver nitrate. Later fulguration was tried by others, but with very little effect. The result obtained by Dr. Bumpus and his co-workers in attacking this problem from an entirely different angle is very convincing and scientific, and we should all consider it a fine piece of work. We all know that most cases of perinephritic abscesses are due, primarily, to bacterial infarcts, causing local foci in the cortex, later enlarging in ruptures of the areolar capsule. I firmly believe that the results of this work as carried on by Dr. Bumpus will be the means of clearing up many of these cases which we have come across in the last ten years.

THE VOMITING OF PREGNANCY.

BY H. G. PARTRIDGE, M.D.

PROVIDENCE, R. I.

Vomiting of pregnancy of any degree is a most worrying condition to the physician, and its treatment demands much thought and judgment. As within a few years our views both as to causation and treatment have changed to some degree, a review of the subject will be of interest.

Etiology. It was formerly customary to classify cases of vomiting under three heads, viz: reflex, neurotic and toxemic, and the treatment was conducted according to this classification. Of late, however, it has become more and more evident that the reflex type is almost non-existent, the neurotic rather rare, and that the toxemic type is the one by far the most frequently seen. The older view as regards the reflex variety was that it was due to abnormal anatomical conditions in the generative tract, such as congenital malformations of the cervix or uterus, or to a misplacement of the pregnant uterus.

The neurotic form was supposed to be due to an increased excitability of the nervous system, pro-

duced by various extraneous influences, such as fear, grief, or hysteria.

As has been said, it is so rare to find any evident anatomical condition upon the remedying of which the vomiting ceases, that most obstetricians attach but little importance to this type, and it may be entirely neglected as a causative factor. The neurotic type is however occasionally seen. These patients present a picture quite different from that of the true toxic variety, and are often helped by various methods which partake of suggestion.

By far the greater number of the cases of vomiting of pregnancy, and all of the pernicious cases, are toxic in origin—just as truly as eclampsia is toxemic in nature.

Autopsies on these patients have shown lesions in the liver similar to those found in acute yellow atrophy. There is decided necrosis in the central part of the lobules, or there may be a general fatty degeneration of the organ. These changes are different from those found in eclampsia, in which the degeneration begins in the peri-portal spaces, and is due to a thrombosis, so that in view of this difference it is believed that the process in cases of vomiting is a condition distinct from that occurring in eclampsia, but that both are due to a disturbance in metabolism, producing a toxemia.

Renal changes are also found in the severe cases. Williams of Johns Hopkins first showed that the urine in these cases presents a high ammonia coefficient, and that the urea output is much decreased. It should be understood that these marked changes in the organs occur only in the very severe cases. But if such lesions are found in these cases, it is perfectly reasonable to suppose that the toxemia which produces, at its worst, actual destruction of tissue, may in a lesser degree, produce the symptoms seen in the less severe cases. It should also be noted that if we rule out the reflex and neurotic types, all the symptoms and the course of the disease may be explained easily on the basis of a toxemia.

Symptomatology. A large percentage of pregnant women have during the early months of their pregnancy some gastric symptoms, such as nausea and occasional mild vomiting, eructations of gas and heartburn. It is only when these symptoms become severe that the physician is consulted. Many patients do not vomit at all, or vomit only once or twice a day, but do have much distress,

often so severe as to demand treatment. From these comparatively mild cases there are all degrees of severity of the disease, up to the true pernicious type, which may be fatal. In the mild and most common cases, the vomiting and discomfort cease spontaneously between the twelfth and fourteenth weeks of the pregnancy, leaving the patient with no bad effects.

The condition known as pernicious vomiting begins in a mild way, but rapidly becomes more severe, until finally the patient vomits everything taken into the stomach, even water. She becomes very restless, tossing about the bed, a very characteristic symptom, sordes appear on the teeth, the tongue is dry, as was formerly seen in prolonged cases of typhoid fever, and the pulse gradually rises. There is usually no fever. Emaciation is marked, and sometimes the patient becomes jaundiced, the sclera showing it before it can be seen upon the skin. The liver is at times diminished in size. Usually the urine shows no abnormality until towards the end, except perhaps some diminution in quantity, as would be expected from the constant drain of fluids from the body. In the terminal stage, albumen and casts may appear. The bowels are sluggish. At the beginning, the vomitus consists of the food taken, which is ejected almost immediately after it is taken. As the disease progresses, and the nausea becomes so persistent that no food at all can be taken, bile is expelled, and finally the vomitus becomes coffee-ground in character.

The blood pressure is low. In some instances, hiccough is persistent and annoying. In the final stages of the fatal cases, the patient becomes lethargic, and comatose.

Diagnosis. In considering the diagnosis it is important first of all to establish the diagnosis of pregnancy, as there are other conditions which may cause a persistent vomiting. Once it has been decided that the woman is pregnant, it is usually easy to rule out the other causes which might produce vomiting. Among these may be mentioned ulcer of the stomach, cancer of the stomach, and chronic nephritis. As a matter of fact it is in most cases not difficult to make a positive diagnosis.

Prognosis. It will be seen from the description already given that the mortality in the mild cases of vomiting is practically nil. It is only when the vomiting becomes of the true pernicious type that

death is likely to ensue. The mortality rates, as given by various writers, differ much, and it is probable that no definite figure can be given, but as will be seen later, under the more recent methods of treatment the mortality is without doubt dropping. In the hands of experienced obstetricians there should be but few deaths; in the hands of the general practitioner, who sees during a lifetime too few cases to have definite ideas as to treatment, and who is therefore unable to judge the cases with the most skill, the death rate will be much greater.

If the fetus dies, the vomiting usually ceases at once, even before abortion takes place.

Pernicious vomiting tends to occur in subsequent pregnancies.

Treatment. The treatment of the commonplace type of vomiting has always been very unsatisfactory. Scores of drugs have been recommended, but there is no one of them which will afford marked relief in more than a small minority of instances, and the trend of opinion is at the present time decidedly away from treatment by drugs.

One of the greatest advances in obstetrics during recent years has however, been made in the treatment of this condition. In 1913, John C. Hirst of Philadelphia advocated the use of extract of corpus luteum in these cases. His theory was, briefly, that during pregnancy every woman was constantly absorbing corpus luteum. The corpus luteum of pregnancy at first increases in size and reaches its greatest development at about the third month, and from that time on, it is gradually absorbed. The nausea and vomiting of pregnancy develop in the early months, during the time that the corpus luteum is increasing in size, and therefore not being absorbed into the system. At about the time that the corpus luteum begins to atrophy the vomiting ceases, or becomes much less. If then, there is supplied to the organism during the early months, corpus luteum, we may anticipate nature, and thereby stop the vomiting at an earlier period than the normal time of beginning physiological absorption.

Since Hirst first brought this theory before the profession, he has written several articles, reporting a large percentage of recoveries. Most of those who have thus treated their patients, and who have had much experience, are very enthusiastic, and have had really marvellous results.

There seems to be no doubt that while it not 100 per cent curative, it will do far more for both the mild cases and the severe ones than any other single means of treatment. In the early stages, when the patient is perhaps not actually vomiting much, but suffers from persistent distress and nausea, it will often help markedly in a few days. In the more severe types, in conjunction with other methods designed to relieve the toxemia, it is of the greatest value.

The extract is put up in ampoules containing 1 cc. each, representing 0.2 gram of dessicated corpus luteum, in an antiseptic solution. In the mild cases, one ampoule should be given daily or every second day. In the severe cases, it may be given twice or even three times a day, although this dosage is very unusual. The solution should be given intra-muscularly, and if, as should be done, the greatest care is taken in giving the injection, there will be almost no reaction and but little discomfort.

Colonic irrigations are of much value in the toxic cases. They should be given once, twice, or three times in the twenty-four hours, by means of a two-way tube, using eight or nine gallons of water at each irrigation, and taking at least an hour for the process. These injections cause a hyperemia of the mucous membrane of the lower bowel, with a resulting removal of the toxins from the blood by osmosis.

In the very severe types of vomiting it was formerly the custom to withhold all food by mouth, and to endeavor to nourish the patient by nutritive enemata. With the advent of the two methods of treatment described, this is being done less and less, in the belief that it is of little avail without taking definite steps to combat the toxins.

Improvement is first shown by a gradual decrease of the extreme gastric distress and nausea. When this has entirely disappeared, food may be given by mouth, teaspoonful doses at first every half hour, and increased in quantity and intervals as the stomach bears it. Milk and lime water, milk and siphon soda, or malted milk are best for the beginning. If milk is distasteful, as is often the case, it may be disguised with cocoa. After liquid diet has been taken and retained for twenty-four hours, solids may be given. It is rare for the vomiting to recur after it has once ceased. When no

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EDITORIALS

HOW MANY "ADS" CAN A DOCTOR READ?

"Just a moment of your valuable time" or "Read this and save money."

How inane are these stereotyped phrases. If one's time is valuable, the conclusion of the sentence concludes the reading; if it isn't valuable, the palpable compliment to an idle man, is not only vacuous,—it sounds foolish. As to the next quotation, if it read: "Read this and spend money," the reading could hardly be better understood.

In the more conservative type of advertising letter, if we pause to plod through it at all and the subject matter is known to us, we wonder why it seems so necessary to go into such detail of explanations; if it is unknown, the wonder is, that it is so needful to praise or defend any article possessing the merit claimed. And in any case sometime before the end is reached, we are groping hopelessly in a nebulous cloud of words and it follows the rest of such into the handiest place we know, the receptacle under the desk.

It is perhaps regrettable that we are unable to plod through the entire mass, as no doubt we are

missing knowledge of many desirable products, but when consideration is invited to a conglomerate list embracing a monograph on gall-bladder infection, a letter setting forth the merits of a certain make of fishing tackle, or So-and-So's improved carburetor, a combination catheter and stone-crusher and Somebody's kidney tonic, not to mention corn plasters, "liver pads," organic extracts, tooth pastes and a treatise upon endocrinology, is it any mystery why advertising literature, the good and bad takes, unread, the "same way out"?

And it is not particularly hard to understand why this is so. Assuming that the average physician is reasonably intelligent he knows that the Federal mails are open to every one not intent upon palpable fraud and while a great deal interesting, instructive and valuable literature may come through the mail, so much more that is quite the reverse, so encumbers, with its ever-increasing volume his office, his time (perhaps), and his patience that the riddle propounds itself, How much can a doctor read?

As against all of this is the realization that practically every Medical Journal in the country, does its best to determine, solicits and accepts only advertisers of known integrity, whose products are dependable and that every requirement of Medical Journal ethics has been complied with.

If the physician reads advertisements at all, it is here that he first looks. They are usually crisp and to the point. Nor is this all: letters, pamphlets and other transient literature become lost or mislaid and even if sought, cannot be found. The Medical Journal, however, is always on file, an advertisement in which is a matter of permanent record and always available.

It would appear of decided advantage, therefore, for advertisers who would attract the attention of the physicians of a given community, and seek their endorsement, to consider the local Medical Journals.

PLACEBO.

"I shall satisfy." The potent little pill of milk sugar with the weight of suggestion behind it—with all the appearance of hidden power of the wee quarter of morphine or nitroglycerin grains 1/100. We all appreciate its value and recognize

its limitations. We recognize, too, how frequently the action of its colleagues, the tablets and the liquids laden with truly active drugs,—aye, even the pretty little bottle-like ampules with their clear and colored liquids for injection—is ten per cent pharmacological activity and ninety per cent lactose—suggestion. Given human suffering—a mind anxious, hopeful and trusting, and even the blundering chiropractor can turn the trick.

But there is another side to the story. Mortal mind, susceptible to error, docile, trusting and ready for suggestion is not an attribute of patients only. The doctors, and indeed the entire genus homo, are similarly equipped. The child-like faith of the homeopath in his little pellets and his *n*th power dilutions is a beautiful example. Here the placebo affects the doctor as well as the patient, both are quite satisfied; while sly mother nature with a laugh in her sleeve terminates the malady unhindered and in her own good time. The effect of this sort of treatment on the patient may be wholly good but on the doctor it is wholly bad as it fills his mind with a sense of having "done something" for the patient and too often is allowed to take the place of rational therapy. It is, however, infinitely superior to the use of really potent drugs in a manner which is reckless and many times based on tradition or the "clinical experience" of the individual physician—experience which has been gained by observations which were essentially uncritical and in which the rule "post hoc ergo propter hoc" has been the guiding principle. The reckless handling of such a two edged sword as digitalis in pneumonia or acetyl-salicylic acid in acute influenza cannot be without serious harm on occasions. Again the wholesale application of such agents as the bacteria vaccines, which conservatively used may at times be of value, must be condemned, as too frequently they act as a placebo to the doctor, a poison to the patient. The use of the placebo is unquestionably justified on rare occasions but it must be the patient and not the doctor who is deceived.

SCARLET FEVER.

The general public and many physicians look upon scarlet fever as one of the most serious of the infectious diseases. The dread of this disease is based not only upon a supposed high death rate

but also because of the several complications which may arise. This conception of scarlet fever is justified when one considers its character of many years ago. But to those who have watched its progress in the United States and England during the last ten years, or fifteen years, it has lost much of its terror. To be sure, there are outbreaks of severe type and these may continue to appear, but on the whole it is a much milder disease than is generally believed. In the London contagious hospitals its fatality rate is about 10%. The prevalence of the disease in this city has diminished very little. In fact the city has recently experienced a very widespread epidemic, yet it is of mild type; few patients are dying.

During the ten-year period ending in 1920 there were in the Registration Area of the United States 35,872 deaths from scarlet fever. During the same period there were 64,754 deaths from measles and 75,175 from whooping cough. As a matter of fact, the number of deaths from these last two diseases were considerably greater because many death certificates are signed bronchopneumonia when the pneumonia is a sequel to either measles or whooping cough and they are unmentioned. It will be seen that both are about twice as often the cause of death as in scarlet fever.

The hospital mortality in this country has also decreased very much. At the City Hospital during 1921 there were two deaths among two hundred cases treated.

Not only has the fatality lessened but also the number and severity of the complications. Otitis media occurs in about 12% of cases. This is based on records of many thousands of hospital patients. Acute nephritis developed twelve times among twelve hundred cases treated at the City Hospital, and among them there were no deaths. Endocarditis is rare. Acute arthritis, while not uncommon, is mild and fleeting. Cervical adenitis with cellulitis and abscess is uncommon.

It is interesting to speculate as to the cause of this change in the disease. It is well known that infectious diseases vary in severity at different periods and it may be that the disease is now passing through a period characterized by mild symptoms, yet there may be another factor which explains part of this change. It is believed by many that strains of organisms causing various infectious diseases breed true. That a mild case of a

disease is likely to give rise to a mild attack in a person infected. While this is not always true, as a general rule this principle can be relied upon. Granting that it is, it is reasonable to suppose that by the isolation of an increasing number of scarlet fever patients in hospitals, and especially those of severe type, only the milder strains are left outside the hospital to propagate the disease. These mild strains are just as liable to be the cause of a widespread epidemic, usually of mild character, as severe types, in spite of the general belief that severe cases are the more infectious.

Whatever the explanation, it is true that scarlet fever is now a comparatively mild disease and it is hoped that it will not change and that it will gradually decrease in prevalence.

LETTER FROM OUR "ASSOCIATE-AT-LARGE"

ON BOARD S. S. ADRIATIC.

There is a peculiar fascination to me in one feature of foreign travel, to watch the crowds, pick out the seasoned traveller and wait for his idiosyncrasies to develop, spot the inexperienced tourist and watch his efforts to appear thoroughly at ease, and from their actions, manners and speech to fancifully weave a story of each. Sometimes I am woefully wrong, but at times surprisingly correct.

On the Adriatic there are types of all sorts. The old timer appears with his old clothes, does not worry over his seat at table, is in no hurry to get his steamer chair located and is usually found in the smoking room with pipe and book prepared to blissfully and restfully pass the voyage without worry and without hurry. The embryonic tourist, on the other hand, appears in a yachting or golfing costume, with his field glasses strung over his shoulder and worries his fellow passengers both with his complaints of service "so unlike what we had with Imperator" and voluntary information of a previous trip when they had a fearful storm and he won an auction pool of eight hundred dollars. In all probability the only boat he ever saw was a Hudson steamer as he came down to New York from Haverstraw, N. Y.

Then there are those who think they are going to be sea-sick, tell everyone of their fears and seek advice upon the use of Mothersill's remedy,

others who are sick and some who ought to be. There is the woman (usually who knows the celebrities of art and literature) who bores us with her imaginary reminiscences. One on board wore Gen. Pershing's V. C. (so she said, given her at parting) and while she was in Washington as the guest of Secretary Hughes she had the entree of the Conference and had so many interesting talks with Mr. Wells, the famous author. Mr. H. G. Wells happens to be on board and failed to recognize his quondam friend.

Life on shipboard induces reflection, and pseudo philosophical thoughts come to all of us, though some are not rash enough to pen them, but I could not but reflect upon the general tendency of the age in which we live to indulge in graft. Graft there is everywhere. The Chinese "squeeze" the Japanese "proper price," the politicians "rake off" the groceryman's "legitimate profit" and the ubiquitous "tip" are manifestations of a universal desire to get something for nothing. Legitimate though this may be from one viewpoint, it is nefarious if coupled with intimidation or exacted under compulsion. The I. M. M., or to be more exact, the White Star Line, should be above suspicion of graft, but an experience at Madeira was particularly distasteful to me and exasperated very many of the passengers. They advertised an excursion at Funchal which included a ride to the station, the ascent of the mountain by the funicular road, lunch at the hotel and a slide down the mountain in the basket sled, a feature of Madeiran life, all for \$10 per. About a hundred availed themselves of the offer. When the first tender came alongside, admittance was refused to those who had not purchased tickets, although personally I went ashore in the first boatload, declining the proposition of the gangway officer to wait until the favored ones who had paid their graft of ten dollars, had been served, but others of my friends submitted. When we reached shore we went to the station to buy our tickets up the mountain, but they refused to sell us till the favored hundred had all reported and been comfortably seated (——) this represents ordinary English profanity. So we were forced to hire an automobile to make the ascent, which was worth several times the five shillings it cost each of us, and after a glorious ride we were first at the hotel. A bottle of wine, mellowed

by ages, with native cakes, and a visit to the wonderfully attractive garden and a thrilling ride down the mountain—a descent of 2,000 feet—on a wicker sled with geared runners, brought us to the station before some of the favored ones had even started up the mountain. Then a ride in a covered sled drawn by two oxen which developed an amazing speed goaded by a driver with a long stick and a boy running ahead, brought us to the hotel in the city. Then followed a characteristic lunch in the open air without hurry or bustle and several hours of comfortable shopping for the ladies and an early return to the ship gave us a most enjoyable day. We had seen everything, had not been rushed, were not crowded and had as good measure, an unusual automobile ride, and it cost us three dollars and fifty cents each. A fair profit, according to the White Star Standard, and increased several fold when we heard the comments of some who had paid the ten.

January 22.

Since beginning this letter to my friends in Rhode Island I have had a varied experience and none has surprised me more than the temperature. I have read of the blue skies, the warm air, the charms of the Riviera and Sunny Italy. I have just come on board the ship after a morning spent in Genoa. In spite of a heavy ulster I am thoroughly chilled, rather I should say was thoroughly chilled, for a violation of the Volstead Act has slightly elevated my temperature. And speaking of Mr. Volstead, it is evident that his influence has not extended to the old world or this ship, and when compared with the expense of getting a dram at home it seems a sin not to get intoxicated here once or twice a day. The mountains are covered with snow, the air is chill, the driver could not speak English, although very fluent in his native language, both with his tongue, both arms, and part of his body. I wonder why the Italians were not furnished with an extra arm or two, their arm is so useful in conversation. Frankly, I was disappointed in Genoa and I was disappointed in Gibraltar and more so in Algiers. I am reminded of an incident years ago when I was returning from Denver with my good friend, Dr. Carver. In the smoking compartment one day there was an Englishman who bored us by his enthusiastic description of the wonderful

scenery he had witnessed. The Rockies, Yellowstone, Grand Canon and Yosemite yielded him an hour of conversation and we were bored, when Dr. Carver made his contribution to what had been in a great measure a monologue. Said he, "My friend, you have seen only the ordinary things of this country. If you want to see what is best you should go to Hunts Mills." It was a corroboration of the ability of an Englishman to appreciate humor when he afterwards came to me and asked directions for reaching Hunts Mills and when I told him to go by way of Pawtucket, he experienced an amazing ignorance of this thriving city.

If the Supreme Council had wished to punish the ex-king of Austria as well as banish him, they should have sent him to Gibraltar. It is exactly as it looks in the picture, a big rock, picturesque to be sure, but inclined to be hilly. There really is no advertisement of the Prudential Life Insurance Co. painted on it, although one of our passengers went around it to get a Kodak view of it. His uncle was an agent of the Prudential.

Algiers is no longer a Moorish city. It is commercialized and aside from the Arab quarter, which is sufficiently dirty to satisfy the most exacting, and the presence on the streets of the veiled women and turbaned Arabs, is not interesting to me.

Walking the deck a few moments ago I heard a lady say, "I did not go on shore. I would give more for my sitting room at home and a good fire than I would give for the whole of Italy." Up to the present writing "Them's my sentiments." The only thing really interesting in Genoa is the cemetery, and that does not appeal strongly to a physician. It verges too much on suggestion of occupation.

January 24.

"See Naples and die," someone said, and I don't wonder at it. It is the dirtiest city of a progressive race that I ever saw—some of the Chinese cities would put it to shame. Never again will I eat Neapolitan spaghetti. I have seen it made and I am not fussy, either. We have had an example of official officiousness in landing at this port. We were lined up at the gangway ready to go on shore when 'an officer appeared and stopped us, and there we stood, at first patiently, then expectantly, and finally wrathfully, for over

two hours, six hundred of us packed in so we could scarcely move, with women fainting, children crying and men swearing, before we were allowed to descend to the tender. We never knew why, but it was reported that some Italian consul had put a ten lira stamp on a passport when it should have been fifteen and until the difference, amounting to, I believe, nearly twenty-one cents, had been paid, no one was allowed to land.

I would like to describe, not Pompeii, but the road we traversed on going to that ancient city; the first you can get from Bulwer Lytton or any guide book, the latter cannot be found in any published work. Multiply the famous East Greenwich detours of some years ago by the number of rough cobbles on lower Weybosset street and it will approximate the number of bumps we bumped.

We have passed the Messina Straits and in the Adriatic are bound for Athens. In two days we should be at Alexandria. This letter is but an attempt to keep my word to Dr. Brown that I would send a letter to the JOURNAL. Pardon the effort; when I get back from Assuam I hope I shall have more interesting material. Of course, there are possibilities; already there are rumors on board that Cairo is under martial law, an epidemic of influenza is raging at Alexandria and one of the Nile boats has been sunk by the rebels. However, we shall see what we shall see.

F. T. R.

ANNOUNCEMENT.

THE ST. LOUIS MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The arrangements of the St. Louis profession for the meeting places for the session of the A. M. A., which is to be held in their city May 22-26 next, are singularly fortunate and convenient; never has the Association been so well favored in this respect. The district in which the meeting is to take place is at the west edge of the business section of the city, easily accessible from all directions by street car or otherwise, and not more than fifteen minutes' street car ride from the most distant hotel. The grouping of the meeting places is so compact that should one walk from the Registration building (Moolah Temple) to the farthest hall it can be done in ten minutes or less; from section to section is a matter of from one to five minutes. The convenience of the location and arrangements of the different halls is more outstanding than in any other city in which the Association has met, and a decided improvement over the accommodations which were had at the meeting in St. Louis, 1910.

The Registration office, Postoffice and Commercial Exhibit is to be in the Moolah Temple

(Shrine), a beautiful and commodious building on Lindell Boulevard, two blocks west of Grand Avenue. At the other extremity of the group is the Odean, the home of the St. Louis Symphony Orchestra, with a main hall which seats better than 2,000, and several lesser halls. The main hall will be used for the opening session. Its acoustics are particularly good and suited to our purpose. The Sections on Practice of Medicine and of Diseases of Children meet here. In the assembly hall of the same building the Sections on Pharmacology and Therapeutics, and on Pathology and Physiology will meet. (It will be noted that there has been an aim to foregather closely allied sections.) The Sheldon Memorial, a very beautiful new hall on Washington Avenue, one-half block west of Grand Avenue, which most admirably meets all requirements, will be the meeting place of the Sections on Ophthalmology and Laryngology, Otology and Rhinology. The Section on Surgery, General and Abdominal, and on Obstetrics, Gynecology and Abdominal Surgery, will be held in the Third Baptist Church on Grand Avenue, a situation well suited to the demands. The Sections on Orthopedics and Nervous and Mental diseases will meet in the Law School of the St. Louis University, on Lindell Avenue, a few steps west of Grand. The hall easily seats 500 and is both comfortable and convenient. Dermatology and Syphilis and Urology will use the large Union Methodist Church, on Delmar Avenue, just west of Grand, which meets every requirement. The Sections on Gastro-Enterology, Proctology and on Preventive Medicine will use the large hall in the Musicians' Club on Pine Street, east of Grand Avenue, and next to the building of the St. Louis Medical Society, where the House of Delegates will hold its sessions. The Section on Stomatology is assigned to the assembly hall of St. Peters Parish House, one block west of Grand on Lindell. Immediately in this district will be found three of St. Louis' most important clubs, the St. Louis, University and the Columbian. Restaurants catering to every grade of patronage are numerous in the district and precautions have been taken to insure that normal rates continue during the meeting.

The St. Louis profession is preparing for an unusual attendance; hotel reservations are coming in rapidly but it is purposed that even the late comer shall be comfortably housed. The wise traveler, however, makes his reservation as early as he finds it possible. Dr. M. B. Clopton, 3525 Pine Street, St. Louis, is Chairman of the Committee on Sections and Section Work.

SOCIETY MEETINGS

SECTION IN MEDICINE.

A regular meeting of the Section in Medicine was held at the Medical Library Tuesday evening, February 28, at 8:45 o'clock, Dr. Charles A. McDonald presiding. The paper of the evening was read by Dr. H. C. Solomon of Harvard Medical School, whose subject was: "The Thorough Treatment of Syphilis." Dr. Solomon's paper was discussed by Drs. Sawyer, Connor and McCusker. Collation followed the meeting.

CREIGHTON W. SKELTON, *Sec.-Treas.*

HOSPITALS

RHODE ISLAND HOSPITAL.

The following appointments have been made: Dr. Charles A. McDonald, Neurologist; Dr. Charles S. Turner, Visiting Physician; Dr. Nathan A. Bolotow, Otological Externe; Dr. Robert M. Lord, Externe to Children's Department; Drs. Charles J. Smith, Ernest V. Beazley and M. A. Mullaney, Assistant Dental Surgeons.

NORMAN C. BAKER,
Secretary, Staff Assn.

(Continued from Page 230)

method of treatment seems to have any effect, and the patient is becoming more and more toxic, as is occasionally the case, the uterus should be emptied. There is no condition of pregnancy the treatment of which demands greater thought and judgment than this. One hesitates to induce labor, and postpones it as long as it is felt to be safe, and yet in doing that very thing one is in danger of postponing it too long. When the patient becomes jaundiced, or when the pulse is persistently one hundred per minute, or over, or when the vomiting continues in spite of careful treatment for three days or more, labor should be induced at once. Under such conditions, delay is extremely dangerous. If done early enough, recovery nearly always follows, and the change in the condition of the patient within twenty-four hours is often wonderful. Vomiting ceases at once and the whole aspect changes for the better.

The treatment may be summed up as follows, according to the views at present:

1. Administer extract of corpus luteum, as the case seems to demand.
2. Give colonic irrigations, every twenty-four hours, once, twice or three times.
3. If these measures do not stop the vomiting, induce labor.

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ORIGINAL ARTICLES

MEDICINAL PLANTS.

WITH SPECIAL REFERENCE TO OUR EARLY MATERIA MEDICA.*

BY H. P. LOVEWELL, M.D.
PROVIDENCE, R. I.

We have found our State a very satisfactory hunting-ground for the botanical collector. It has a varied topography and abounds in bogs, swamps and marshes, running streams and quiet ponds. It possesses a flora that is unique in many respects.

In the region of South Kingstown we have an intrusion of a Southern or pine-barren flora. At Wallum Lake, in the northern part of the state, is found a flora that suggests the region of the White Mountains and Wachusett.

Some three years ago we began to collect plants of medical interest growing wild in this State. There are at least three hundred plants growing within our borders that have in the past been credited with some medicinal value, although the true worth of a large number of these is doubtful.

The medicinal uses of many of our native plants have descended from the aborigines. The Red Men of the forests had a keen instinct for scenting out the medicinal and the poisonous plants; they had a *Materia Medica* of their own. They made use of certain plants as astringents and tonics; different species of the *Iris* and the root of *Mandrake* or *May-apple* were in common use as purgatives. At least a dozen plants were used as emetics, such as *Gillenia trifoliata* (Indian physic) and *Euphorbia ipecacuanha*. *Seneca* snake-root and *Virginia* snake-root were used as sudorifics. Their Anthelmintics were *Spigelia Marilandica* or *Carolina* Pink-root, the *Lobelia cardinalis* or *Cardinal-Flower*, etc. In "Father Smith's Indian Dispensatory," we find mentioned *Wild Ipecac*, *Culvers-Root*, *Butternut*, "Nine-Barkroot," *Agri-mony*, *Horse-balm*, *Bark of White Pine*, etc., etc.

Johann David Schöpfung in 1783 began the first scientific study of medicinal plants indigenous to

the United States. In pursuit of his studies he relates having visited Rhode Island and Connecticut. Unquestionably he received his knowledge of many of the plants listed in his "*Materia Medica Americana*" directly or indirectly from the native Indian.

The space allotted for this article allows us to mention but a few of the medicinal plants collected in Rhode Island:—

Araceae.

Orontium aquaticum,—the Golden Club. The root is acrid and poisonous, but becomes edible by roasting. Both the seeds and roots were eaten by the Indians.

Liliaceae.

Aletris farinosa,—Star grass. One hundred years ago Jacob Bigelow said, "I know of no plant which surpasses this one in genuine, intense and permanent bitterness. Neither aloes, gentian or quassia exceed it in the impression produced on the tongue." This bitterness has brought it into notice in the quality of a tonic and stomachic. Dr. Cutler, in his account of the plants of New England, informed us that this plant had been considered useful in chronic rheumatism. Millspaugh says *Aletris* was held in high repute by the aborigines as a stomachic, bitter tonic and emmenagogue. Parts used, rhizome and roots.

Erythronium Americanum,—Adder's tongue, Dog's-tooth Violet. The root was formerly used as an emetic, but its irritant properties are lost in drying so that it becomes bland. In two localities we have discovered quite large beds of this plant, although in some of its former haunts, it is getting quite rare.

Veratrum viride,—American Hellebore. A stout herbaceous perennial, two to four feet high. Leaves strongly plaited, the lower large, the upper very much reduced. Flowers in dense spike-like racemes, appearing in June and July. Found abundant in swamps and low grounds, associated with skunk-cabbage. Parts used,—the rhizome and rootlets. Official U. S. Pharmacopoeia; classed as a cardiac depressant; it is probably less likely to cause cardiac depression than is aconite, but is less efficient in the doses generally used. *Veratrum*

*This article was offered in explanation and collaboration of exhibition of certain botanical specimens of medicinal properties, at the quarterly meeting of the R. I. Medical Society, March 2d, 1922.—(Ed.)

viride has been suggested for chronic hypertension, and has been highly recommended for puerperal eclampsia. Instances of accidental poisoning are reported for man and for various animals and birds. The seeds have been specially mentioned as poisonous to chickens. The root has been eaten with fatal results by human individuals. Death is caused by paralysis of the heart.

Haemodoraceae.

Lachnanthes tinctoria.—Red-root, is found in sandy swamps near the coast. The rootlets are a deep orange red, stem erect, hairy above the last leaf, leaves are sword-shaped, mostly clustered about the stem. The flowers are a compound cyme, dingy yellow perianth woolly externally. The root was used by the aborigines (especially the Seminoles), as an invigorating tonic. It was supposed to cause a fearless expression of the eye and countenance, a boldness and fluency of speech. Overdoses said to resemble mild poisoning by Belladonna. Aside from its narcotic use by the Indians, it has been used for dyeing purposes. The drug is used by the Eclectics and Homeopathic practitioners for nervous disorders. Red-root was quoted by Darwin as influencing the color of the swine in the South. Black pigs eat it with impunity and survive; white pigs die; hence the prevalence of dark swine in that vicinity.

Phytolaccaceae.

Phytolacca decandra.—Poke-weed, Pigeon Berry. The medicinal uses of poke-root were handed down to domestic and botanic practice by the aborigines, who valued the plant not only as an emetic, but also as an efficient remedy in gonorrheal and syphilitic rheumatism. Among the earliest American writers this was considered fully equal to *Ipecacuanha* as an emetic. Its emetic action usually followed 10 grains of the powdered root. A tincture of the berries was valued in specific and non-specific forms of rheumatism. Millsbaugh states that the berries have been used for pies by frugal housewives. The young shoots made an excellent substitute for asparagus. Berries and root official in U. S. P.

Ranunculaceae.

Cimicifuga racemosa.—Black cohosh, Black snake-root, Squaw-root, Bugbane. Description—This tall, graceful and showy perennial grows to a height of from three to eight feet; leaves alternate, tri-ternately divided. Inflorescence of a very

long or compound, wand-like upper axillary or terminal raceme. Flowers, scattered, foetid, creamy white. It grows in rich open woods and along the edge of fields. When woods in its favorite localities are at all dense, the plant will be found only in its borders. Black cohosh was a favorite remedy among all tribes of the aborigines, being largely used by them in rheumatism, disorders of menstruation and slow parturition. Also used by them as a remedy against the bites of venomous snakes. Extract and tincture official in U. S. P.

Berberidaceae.

Podophyllum peltatum. When your walks lead in the direction of deserted farmhouses, if you explore the region of the old apple orchard, you may find a plant not native of the State, but set out years ago for its medical value; we allude to the Mandrake or *Podophyllum*. It has very large leaves, and a single white flower about two inches in diameter upon a short, curved peduncle, blossoms in May and ripens its fruit in August and September. Parts used, the rhizome and rootlets. Over one hundred years ago the Shakers of Lebanon, N. Y., extracted an active principle which was very much sought by physicians. Mandrake was used by the Eclectics as a substitute for mercury in the treatment of syphilis and has even been dominated "Vegetable calomel."

Papaveraceae.

Sanguinaria Canadensis.—Blood-root. Most elaborate treatises have been written upon this most valuable plant by all writers upon botany and medical botany. The most extensive article ever published on this subject was written by Dr. Tully of New Haven, and published in the *Philadelphia Medical Recorder*. Williams says that it has always been a subject of wonder that the "Steamers" or "Thompsonians," had not selected this article for their almost divine adoration, rather than their more dangerous *Lobelia*. We consider it of value in those irritative conditions of the trachea that follow grippe conditions.

Leguminosae.

Cassia Marilandica.—American Senna. With its yellow petals and chocolate colored anthers is an interesting plant and possesses laxative qualities. It is apt to cause griping unless qualified by the seeds of anise, caraway, etc. The action of American Senna is similar to that of the African

drug, although it is much less efficient, a dose one-third or one-half larger being required to produce the same effect. The leaflets formerly official were dropped from the U. S. P. in 1882.

Geraniaceae.

Geranium maculatum.—Cranesbill. The American aborigines valued this plant as an astringent in looseness of the bowels and exhaustive discharges of all kinds. Schöepf recommended it as a remedy in the second stages of dysentery and cholera infantum. This has been justly considered one of our best indigenous astringents. The rhizome has a considerable percentage of both tannic and gallic gases. *Geranium* root is official in the U. S. P. in the form of the fluid extract.

Euphorbiaceae.

Euphorbia corollata.—Large Flowering Spurge. The flowers are in five to seven rayed umbels, the rays two to five forked; involucre white, petaloid, showy, on long peduncles; habitat in rich and sandy soil. This species is actively emeto-cathartic; in small doses diaphoretic (was once substituted for *Ipecac* in Dover's Powder). More pleasant to the taste than *Ipecacuanha*. This species undoubtedly used by the aborigines.

Aquifoliaceae.—The Holly's. In general, plants of this order are possessed of emetic properties. Holly has been more used in Europe than this country. Its bitterness led to its use in intermittent fever, but in this condition it has proven worthless. In large doses the leaves produce nausea and vomiting, while the berries cause both vomiting and purging. *Ilex opaca* is said to be somewhat demulcent and has been used in pulmonary affections to allay cough and promote expectoration. Professor Barton stated that the bark had long been popular as a remedy in different parts of the United States (Black Alder), being used as a substitute for Peruvian Bark. Most commonly employed in a decoction.

Thymelaeaceae.

Dirca palustris.—Leatherwood. Belongs to the *Mezereum* family. This is a marshy shrub, frequenting low woods in the vicinity of water. It is remarkable for the flexibility of its wood and toughness of its bark; a man cannot pull apart so much as covers a branch of half or a third of an inch in diameter. Benjamin C. Barton says that this was used as a blister and mentions the fact that some of our Indians used as a cathartic a

decoction of the bark of the root, and they also used it for their cordage. The fruit is a small, red, one-seeded berry and is poisonous. In effect similar to over doses of *Stramonium*. Jacob Bigelow stated that the properties of the *Dirca* were somewhat similar to those of *Polygala senega* (Seneca Snake-root), for which it might be substituted in small quantities. The flowers appear in April or May and fall before the leaves expand.

Araliaceae.

Aralia racemosa.—Wild Spikenard. Rafinesque states this plant was used by the Indians as a carminative, pectoral and antiseptic, in coughs, pains in the breast and mortification; the root, with horseradish, was made into a poultice for the feet in general dropsy. Culpepper's Herbal says that Spikenard is good to "provide urine and cureth the pains of the stone in the reins and kidneys." In domestic practice it has been made into a composite syrup with the root of *Inula helenium*, and used as a remedy in chronic coughs, asthma and rheumatism. Millsbaugh says drop doses of the tincture (of the root) promptly relieved a case of asthma in one-half hour and also exerted a beneficial effect in warding off recurring attacks.

The Umbelliferae.—Herbs with alternate, mostly compound, leaves and flowers in umbels; stems usually hollow. Leaves with dilated or clasping petioles. Umbels generally compound, the secondary ones being termed umbellets. A very important group comprising many species of medicinal or economic importance. An umbellate plant that grows in wet places should be regarded with suspicion until its character has been determined. The organ that shows the greatest amount of variation in form is the fruit and this should be carefully studied in the particular species.

Conium maculatum.—Poison Hemlock. Native to Europe and Asia but has become naturalized here. Parts used—the fruit gathered while yet green. U. S. P. Of the substances extracted from the plant, the chief is coniine. This is a colorless oily liquid with an unpleasant mouse-like odor and a biting taste. The juice prepared from the Hemlock has been used as a sedative and narcotic in various spasmodic diseases. Collection; the herb and unripe fruits are collected in June from second-year plants. Hemlock is a biennial.

Sanicula marilandica.—Sanicle, Black Snake-root. A perennial, two to three feet high. Leaves

five to seven times parted, the radical ones long-petioled. The styles much exceed the bristles of the fruit, recurved. Habitat—Woods and copses, Canada to Carolina and westward; common. Various contradictory properties have been assigned to this plant; as for instance that it is nervine, anodyne, and astringent. Its virtues are problematical.

Cicuta maculata.—Water hemlock. Of medical interest because it is one of the most poisonous plants indigenous to this State. Stem four to eight feet high, striated with green and purple. Leaves pinnately compound and serrate leaflets, involucre usually none, involucels of several slender bracelets and white flowers. Habitat—in swamps and wet places; common everywhere. This plant has fasciated roots and is especially dangerous because these roots have been frequently mistaken for horse-radish, parsnips, artichokes or sweet cicely. Symptoms—vomiting, colicky pains, unconsciousness, convulsions, ending in death. Porcher says, "The leaves, flowers and seeds are narcotic, sedative, and anodyne. It resembles *Conium* in its effect and has been used as a substitute for it."

Cornaceae.—In our tramps in early spring the Cornels or Flowering Dogwoods are of much interest, and the more so when we learn they possess an active principle cornine, an alkaloid having properties similar to quinine and much used by the Southerners during the Civil War as a remedy in malaria. The only flowering shrubs with which the Dogwoods could be confused are the *Viburnums*, but their flower is a star with five rounded divisions and five stamens. If it is remembered that the Dogwoods are always in fours and the *Viburnums* in fives the difficulty is removed.

Ericaceae.

Chimaphila umbellata.—Pipsissewa. The aborigines used this as a tonic and diuretic as well as for rheumatism and scrofulous disorders. Closely resembles *Uva-ursi* in its action and used for like purposes; beneficial in chronic affections of the urinary organs. Fluid extract of the leaves is official.

Uva-ursi.—Bearberry, Upland Cranberry. Not much used until the middle of the eighteenth century. Admitted to the London Pharmacopoeia in

1763. It is astringent, tonic and diuretic. The leaves are official in the U. S. P.

Gentianaceae.

Sabatia.—American Centaury. Jacob Bigelow in 1817 stated that he had no hesitation in attesting to the utility of this plant. It seemed to him to rank among the more pure or simple bitters.

As regards the Gentian family, both the Fringed and the Closed varieties possess bitter principles, but in a less degree than the official variety (*Gentian lutea*), which is imported from Southern Europe. Several varieties of *Sabatia* were formerly used in intermittent fever, sometimes with curative effect. Another member of this family is the Buckbean, a rather attractive plant when in blossom and possessing the bitter tonic properties common to this order, also used as a laxative, the rhizome and leaves contain the active principle. As early as 1613 we find mention of a decoction of this drug being used to remove visceral obstructions, also as an emmenagogue, diuretic, and as a destroyer of intestinal worms. Bigelow considered that the root of this plant was entitled to a high place among our bitter tonics.

Apocynaceae.

Apocynum cannabinum.—Dogbane. The use of this plant has been traced directly from the aborigines to the present time. Professor Austin Flint in his lectures 1865-6 spoke of the use of this remedy in ascites and alludes to it in his "Practice" edition of 1866. It was in common use among the Sioux Indians of Dakota and Montana and the Cheyennes in Indian Territory. It was one of their favorite remedies as a cure for the bite of the rattle snake. The root was used freshly grated or dried. The dose of the powdered root given internally was two pinches for a child and three pinches for an adult.

Labiatae.

Lycopus virginicus.—Bugle weed. In incipient phthisis and hemorrhage from the lungs, this plant was a favorite remedy of Dr. Solomon Drowne, who was professor of Materia Medica and Botany in Brown University from 1811 to 1834. Drowne was deservedly celebrated for his scientific knowledge of the medicinal plants of this country. Millsbaugh checked a serious case of epistaxis by giving teaspoonful doses of the tincture of the whole plant and laments that this valu-

able remedy was dismissed from the U. S. P. in 1882.

Solanaceae.

Datura Stramonium.—Thorn-apple. Seems to have been first introduced freely into practice by Baron Stork of Vienna as a remedy in mania, epilepsy, convulsions, etc. Commonly used in asthma. This practice was first suggested by the employment of another species, *Datura ferox*, for similar complaints in the East Indies. The external use of *Stramonium* is of much older date than its internal exhibition. Bigelow says, "In painful hemorrhoidal tumors the ointment of *stramonium* with the ointment of acetate of lead gives in many cases very prompt and satisfactory relief, being inferior to no other application with which he was acquainted."

Solanum Dulcamera.—Bittersweet. Flowers drooping, corolla wheel-shaped and five cleft, with two green ovate spots at its base, fruit a two-celled bright scarlet translucent berry. Bigelow refers to the splendid works of Williams and Bateman on "Diseases of the Skin," as giving some important testimony on the efficiency of *Dulcamera* in cutaneous affections.

Scrophulariaceae.

Chelone glabra.—Balmoney, Turtle Head. Mills-paugh states that Balmoney was for years a favorite tonic and laxative among the aborigines of North America.

Caprifoliaceae.

Triosteum perfoliatum.—Dr. Tinker's Weed, Wild Coffee, Fever root, Wild Ipecac. This plant is not common in any one locality, and generally occurs in limestone soils. Its medical properties are those of an emetic and cathartic. Schöepf speaks of it as an emetic only and alludes to its use in intermittent fevers and pleurisy. Some of the Germans of Lancaster County, Pa., used the dried and roasted berries as coffee, and found them an excellent substitute.

Compositae.

Tussilago Farfara.—Coltsfoot. This plant is very common in Europe and has become naturalized in some parts of this country, more especially in the Northern States. The generic name is from *tussis* and *ago* in allusion to its pectoral powers; and the specific one is from the resemblance of its leaves to a kind of poplar called by the ancients *Farfarus*. It was well known to the early writers

on *Materia Medica* and is spoken of by Hippocrates as a remedy in ulcerations of the lungs, and by Dioscorides, Pliny and Galen as an excellent remedy when smoked through a reed, to relieve obstinate coughs.

Inula helenium.—Elecampane. *Inula* was one of the most famous of ancient medicines and continued in vogue in the "Old School" until recent times. It owed the reputation it gained to its stimulant properties. In the writings of Hippocrates it was stated to be a stimulant to the brain, stomach, kidneys and uterus. This plant is now thoroughly naturalized in Europe and in our country. *Inula* is simply mentioned in the U. S. P.

We must not forget our native trees and shrubs, many of them having medicinal uses, the bark of the Oak is a valuable astringent. The inner bark of the Butternut is a mild cathartic resembling rhubarb. The American Aspen or Poplar at one time had a reputation of being a tonic and stimulant. From the Pine family are derived resins, which are much used as ingredients in plasters and cerates. The Hemlock bark is very astringent and is much used in tanning. It appears to have no special advantage over other common vegetable astringents. The American Yew we have not as yet discovered wild in this State, although it has been reported as located in certain sections. It is believed to have poisonous properties. Witch Hazel or *Hammamelis* is well known and contains astringent principles. The Buckthorn, although native in Eurasia, is found here both cultivated and escaped. It is a powerful laxative. The species found in Rhode Island has been used by veterinaries.

In pursuit of the medicinal plants of this State, it is first necessary to find if the species sought are native to this region. We have found Bennett's *Flora of Rhode Island* of decided help. The Providence Franklin Society have published a revised edition of this work. Provide yourself with topographical maps of the region you are to visit. A camera should add interest to these trips, but do not expect satisfactory pictures of plants taken when the wind is rated at sixty miles an hour.

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REMARKS ON THE CLINICAL INTERPRETATION OF THE WASSERMANN REACTION.*

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The Wassermann reaction has been much abused both by its friends and severe critics. This abuse is the result of expecting too much of the test or from not interpreting the results obtained in the proper manner. I shall try to run over in a few words some of the pitfalls in the road of the proper interpretation of the Wassermann test.

The Wassermann test is not a specific reaction for syphilis and there are a few conditions aside from syphilis which will produce a positive reaction. There is a lack of unity in the opinions of the various observers as to what conditions aside from syphilis will give a positive Wassermann reaction. Leprosy, malaria, trypanosomiasis, acute infections such as scarlet fever, pneumonia and tuberculosis have been stated to give a positive Wassermann reaction at times. For practical purposes, however, it may be stated that in this climate there is very little reason to make errors because of other diseases than syphilis which give a positive Wassermann reaction. As a matter of fact, investigation in this community shows that tuberculosis is not a complicating factor in the production of a positive reaction, nor is there any evidence at hand to show that malaria will give a positive reaction. Trypanosomiasis and leprosy need not be considered. It is only necessary then, to avoid taking a test in the presence of

acute infections. We may, therefore, consider that the Wassermann reaction, if properly performed, is good evidence of syphilis if it is strongly positive.

The question of proper technic is of course a very important one. There are so many modifications of the original Wassermann technic varying in the degree of sensitivity, that certain allowances have to be made for this in the interpretation of any given result. The more sensitive the antigen used, the higher number of positive results will be obtained in any given group of sera. Thus, a case may give a negative reaction as reported by one laboratory and a positive reaction as reported by another laboratory, depending on the greater or lesser sensitivity of the antigen used rather than because of any technical error. It may be taken for granted, however, that any good standard technic which gives a positive reaction with the patient's serum may be considered as suggestive of syphilis. It must be borne in mind at all times that the Wassermann technic is a very delicate one and depends upon several biological reagents which vary in sensitivity from day to day and under differing circumstances and further, that the quantities of the reagents used involves the result. It is easy to realize that errors occur in the technical procedure, and it is possible that the result reported by the laboratory may be an error. We may, therefore, speak of false negative and false positive reactions. In any good laboratory such errors will be very infrequent but they are always possible and it behooves the clinician to bear this fact in mind when interpreting the positive or negative reaction in terms of syphilis in a patient.

A study of the reports of two laboratories on the blood sera of 3,000 patients was recently made by me. This study showed that there was a complete uniformity in the findings of the two laboratories in 93.44 per cent. The 6.56 per cent. variation included cases reported as doubtful. Considering only the variation of cases reported positive by one laboratory and negative by the other, the percentage of variation was 4. This was 1.4 per cent. positive in one laboratory and 2.6 per cent. positive by the other laboratory. Some of the cases reported positive by one laboratory and negative by the other were known to be syphilitic so that the negative reaction was the

*Read before the Section in Medicine of the R. I. Medical Society, February 28, 1922.

incorrect one. Considering, then, the cases that either laboratory may have reported as positive in cases not known to be syphilitic and which were reported negative by the other laboratory, the percentage was 3.16. This is probably a higher percentage for false positives than actually occurred, as some of these cases were probably syphilitic. This percentage variation is based on only one test. Repetitions resulted in a uniformity of findings in the majority of cases. This study indicates that there are relatively few false positives reported by a good laboratory. It does indicate, however, that there is apt to be an occasional error if the results of one test are taken as conclusive. The possibility of technical error creeping in can be largely avoided by having a test repeated and the variation in result that is likely to occur according to the technic used can be partly overcome by having the test performed in more than one laboratory. While the variation in the reports of the two laboratories quoted are quite insignificant considered from the standpoint of statistics, they are of very great importance when considered from the standpoint of the individual patient. It is the clinician's duty to take steps to prevent the wrong diagnosis being made upon a patient because of any difficulty or error in the performance of the test. The final interpretation of the result lies, or should lie, entirely with the clinician. Where the clinical evidence of syphilis is sufficient to make the diagnosis, the Wassermann test is only of importance in corroborating clinical information. If it should be reported as negative in such a case the clinician should either say, "so much the worse for the test" or have it repeated. This should be true in those cases in which there is no evidence of syphilis from a clinical standpoint and the laboratory reports a positive reaction. In such cases the report of the laboratory should be confirmed by a second test or even a third.

One negative reaction should not be considered as excluding syphilis but the test should be repeated. The Wassermann laboratory of the Massachusetts Department of Health prints on its report blanks the following statement: "negative does not exclude syphilis. In dealing with obscure conditions less than three negatives has little diagnostic significance."

There can be no doubt whatever that a negative

Wassermann reaction may be obtained in the presence of syphilis in the patient even if repeated many times. More will be said on this matter in a minute. The presence of a consistently positive Wassermann reaction may be considered as *prima facie* evidence of syphilis in this locality provided only that the laboratory which made the report is reliable and that the patient is not suffering from an acute febrile disease. It must always be borne in mind, however, that while the patient may have syphilis, the symptoms from which he suffers may not be due to syphilis. In other words, a chronic disease as prevalent as syphilis may be present coincidentally with other pathological conditions.

The Wassermann reaction is important not only as an aid in diagnosis but also in following the progress of the case during treatment. One desires to see a patient become Wassermann negative. This, however, should not be the whole consideration in the treatment of the syphilitic. In the first place, we have as yet no definite proof that the negative Wassermann reaction means a cure of the disease; in the second place, as Wile has pointed out, a negative reaction as obtained with one Wassermann technic would be reported as positive if performed by another technic; thirdly, there are a great number of late cases of syphilis that will apparently never become Wassermann free, yet the patients will be in good health and apparently immune from further evidence of the disease; and in the fourth place, a reaction which becomes negative under treatment may shortly become positive again after the cessation of treatment.

A word may be said as to the value of the test during the period of treatment. It is often stated that the test has no significance if the patient has recently had arsphenamine or mercury. As a matter of fact, a study of a great many cases under treatment has shown that in only a small minority do a few injections of mercury or arsphenamine, or the two combined, have any effect upon the Wassermann test. It does occasionally happen that a strongly positive Wassermann reaction may become negative after one or two injections of arsphenamine. This, however, is an exceedingly rare phenomenon and in a general way, it may be stated that if a patient has had only a few injections of arsphenamine or mercury, the test will be fairly reliable. If a patient has had a consider-

able amount of treatment, however, and if he is apparently approaching a serological cure, that is, reaching a period in which the Wassermann reaction will be consistently negative, there is a period in which there will be a great variation from week to week and the result of the test in such cases will be found to be negative one week and the next week will again be positive. This merely indicates that one negative test during treatment cannot be taken as evidence that the patient will remain Wassermann negative for any period of days.

As already mentioned, a negative Wassermann reaction is not evidence of the absence of syphilis in the patient even though this negative Wassermann reaction be confirmed by many tests. This has been brought out from a pathological standpoint by Warthin. From a clinical standpoint, this can be seen probably to the best advantage in syphilis of the nervous system. In general paresis, the Wassermann reaction is positive in the blood from 95 to 98 per cent. of the cases. In tabes and cerebrospinal syphilis, however, the Wassermann reaction in the blood is positive in probably only 60 per cent. of the cases. In other words, 40 per cent. of the cases of tabes and cerebrospinal syphilis in which there is absolute evidence of an active syphilitic process from a clinical standpoint and from an examination of the spinal fluid, will give negative Wassermann reactions in the blood. It follows that a negative blood Wassermann reaction is of comparatively little significance for the clinical diagnosis of tabes or cerebrospinal syphilis. If this is borne in mind no criticism is attached to the Wassermann reaction in these cases. It is necessary whenever these conditions are suspected to perform a lumbar puncture and examine the cerebrospinal fluid. This is equally true in using the Wassermann reaction to check up the progress and the treatment of the case. It must at all times be borne in mind that the blood Wassermann reaction is not an indication of a condition of the central nervous system. It will be found that cases under treatment which had a positive blood and spinal fluid Wassermann reaction at the beginning of the treatment will show a non-concomitance of the tests in the blood and cerebrospinal fluid. There are some cases in which the blood Wassermann reaction will become negative in a comparatively short period,

whereas the cerebrospinal fluid Wassermann reaction will remain positive. This occurs in general paresis, cerebrospinal syphilis and tabes dorsalis. On the other hand, there are many cases of syphilitic involvement of the nervous system in which after treatment the cerebrospinal fluid Wassermann reaction will become negative, whereas the Wassermann reaction in the blood will remain positive.

The Wassermann reaction in the cerebrospinal fluid may be negative in cases of syphilis of the nervous system. This is exceedingly rare in general paresis where it happens in less than 1 per cent. of the cases. It is a little more frequent in cerebrospinal syphilis and tabes dorsalis and rather frequent in vascular neurosyphilis. The diagnoses must be made on the history, clinical symptoms, and other cerebrospinal fluid tests.

A word may be said as to the so-called provocative Wassermann reaction. Swift was the first to state that in some cases of syphilis giving a negative blood Wassermann reaction the administration of arsphenamine would lead to the production of a positive Wassermann reaction. This has never been very firmly established and it is probably true that the same result would be obtained by the repetition of the test on several occasions without the administration of arsphenamine. However, with a difference of opinions on this matter, I would not wish to be dogmatic in my statement.

SUMMARY.

A consistently positive Wassermann reaction in the absence of acute febrile conditions is evidence of syphilis in a patient in the United States.

A negative Wassermann reaction is of little clinical significance in ruling out syphilis.

One positive Wassermann reaction in itself should not be considered as conclusive evidence of syphilis, as technical errors may have occurred. It should always be checked by at least one other confirmatory test.

The technic used is of importance in the interpretation of the Wassermann reaction, as the more sensitive the antigen used the greater percentage of positive results will be obtained. It is to be remembered that syphilis may be concomitantly present with other conditions and that the present-

(Continued on Page 252)

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EDITORIALS

CHIROPRACTORS AND OUR DUTY.

It requires no argument to prove that chiropractors are doing a flourishing, and for them, a very profitable business. Likewise, it is abundantly clear that the public, both intelligent and unintelligent, are being fooled by chiropractic propaganda. Not a day passes but some poorer but wiser individual comes into our consulting rooms and informs us about "spinal adjustments" suffered at the hands of chiropractors. These "ad-

justments" have cost money and have been inflicted without even a pretense, nay more, with a brazen denial of the need of, an antecedent diagnosis. The result—empyema unrecognized; rheumatoid spines irreparably damaged; tuberculosis allowed to progress while chiropractic tinkering is in progress; syphilitic spinal cord lesions permitted to advance, and a hundred more equally serious conditions unchecked while these sordid charlatans are reaping a financial harvest from the sufferings and the blind faith of afflicted men and women and little children.

And what are we doing about it, we of the medical profession, to whom people look and rightly look for guidance? The day of merely individualistic medicine is gone forever, because our very achievements in science have compelled us to develop a social conscience which finds its satisfaction in the fulfillment of social duties. And yet what are we doing? Well, for one thing, we are letting the tyranny of past traditions seal our lips; we are practically dumb. With every loud-mouthed quack and cheat dinning his words into the public ear and scattering his printed lies with every mail delivery, we remain silent; or if we speak it is with ineffective voice, lacking both the force and the influence which come of organized effort. We say it is not dignified, it is not professional, it is not a lot of other things for doctors to address the public. Why in Heaven's name is it not? The world has moved since we were almost a priestly caste. Shall we alone of the professions stand still? When everyone is speaking, shall we permit the purveyors of falsehood to hold the stage while we who have ever striven and do now strive to serve the truth, remain silent?

We do less than our duty when we fail to educate the public mind in matters concerning health and disease. By whom will the man in the street be led if not by us? Why, by the charlatans who are leading him now. Sick men and women do not go to chiropractors for any other reason than to regain their lost health, and by chiropractors they have been told week in and week out that health is to be regained by "spinal adjustments." Only by personal experience do they learn the frequently cruel deception of the whole business and the crass commercialism that motivates it. Would it be too much to ask of the medical profession that it speak out on behalf of the truth? The chiropractor fattens upon the public ignorance, credulity, and desire for health, and he feeds the public before devouring it on—printer's ink. Can we really blame the ordinary uninstructed man who believes the uncontradicted chiropractic advertisements? To ask such a question is to answer it. There is decadence enough in public and private life without adding medical decadence to it—and that we certainly do in the measure that, without contradiction from us, we allow chiropractors and other social leeches to suck the lifeblood of the sick and the maimed. In New York

they have combined the efforts of the Medical Society of the State of New York and the Medical Society of the County of New York to oppose the proposed bill for the licensing of chiropractors. What are we in Rhode Island going to do, for certainly the same gentry will attempt to obtain legal recognition here? As medical doctrine chiropractic is less than contemptible, but as a public menace it should call forth our united and therefore effective opposition.

MEDICAL SPECIALTIES.

The practice of medicine is becoming diversified. No longer does the family physician attempt to treat all the diseases of which his patients are found victims. He often sends them to other physicians, who by training and experience are fitted to diagnose and treat special diseases or diseases of special organs. The family physician is honest and wishes only that his patients shall receive the best possible medical advice and treatment, even at personal financial loss. This is as it should be, for the practice of medicine should never come to the point when it is considered a purely commercial enterprise. Should that time ever come the public would no longer trust and revere physicians as they have and still do.

When a physician recommends one of his patients to a specialist he selects one whom he knows to be fully capable of treating his patient. He is in a position to know what training and experience the physician specialist has had, and is well informed as to his success in his chosen field. It so happens that the public is being educated to the advantage of consulting specially trained men. They know that hospitals utilize specialists in certain departments and are well informed that result of treatment is superior to that obtained by the general physician, who cannot to-day meet all the situations as he did in days gone by. It is becoming common for people to directly consult specialists for bodily ills. Before consulting one, they often make inquiries from friends, and acquaintances, and sometimes from hospitals, but for obvious reasons not very often from the family physician. It would seem that the time has come when physicians who specialize in certain diseases should be permitted to put on their sign some word or words which will indicate the nature of their specialties. Then the public would be able

to select intelligently properly qualified physicians. This subject is not new, of course, and has been talked about for several years. It is surely time, however, that some action should be taken.

In Rhode Island the State Board of Health licenses all physicians for general practice. This should, of course, be continued for all physicians, but this Board should be authorized to grant to qualified men a special certificate indicating what specialties they may practice, and at the same time be allowed to use some designated words or letters on their signs indicating these specialties. Such a privilege should be granted only after these men had been examined by recognized specialists in each line, giving due consideration to education and practical experience in a medical school or special hospitals. This would not prevent any physician from treating diseases belonging to specialists, but it would prevent him from advertising himself as a specialist until he has duly qualified. The public would then be protected. They would have a way of knowing who are qualified in the opinion of medical profession. If any person chose to go for treatment to any other physician for a condition which is generally treated by a specialist, that is his business and responsibility since he has a way of knowing who are the best qualified specialists.

Young men are flocking into specialties, some are properly trained, many are not. Likewise, older men are turning to them because the work is not so arduous or the remuneration is better. The result is that much poor work is being done in the name of surgery and will, if unchecked, lessen the repute in which doctors are now held. Some such method for the designation of qualified specialists is necessary in justice to the public and properly trained specialists, and works no hardships on physicians in general, for it does not prevent them from treating any disease they feel themselves qualified to treat.

Chiropractics, osteopaths and healers of many kinds are appearing and clamoring for recognition. But so long as our "own house" is in order, we never need fear that they will long flourish or seriously compete with scientifically educated physicians. There have always been quacks and always will be, but so long as the regularly educated physicians honestly and faithfully serve the public, legislative recognition will never be extended to them.

FUMIGATION.

Inasmuch as there is still, especially in the rural districts, considerable ignorance concerning the value of fumigation after contagious diseases, would it not be wise for the profession to disseminate wherever possible the present day teachings with regard to contagion? When one recalls that the use of a noxious gas in an apartment where contagious diseases have been housed, has been in vogue for generations, and that the easy, but futile plan of burning some potent material appeals to the public teachings of years, as well as to a certain innate desire to kill an unseen enemy, it is easy to see that in this instance the unlearning may be much more difficult than the first learning. A recent editorial in the *New York Times* suggests that in some communities it may be wise to continue fumigation for a time to satisfy the desire of the public while they are passing through the unlearning period.

Perhaps the easiest way to enlighten the people is to teach the present doctrine of "carriers." This appeals in a rational way to most people and they see very easily the uselessness of burning a stinking gas in a harmless room when the germs of the disease are outside, living a parasitic existence in the former patient. Probably the amount of money and time still spent annually in fumigation is considerable, and time will undoubtedly remedy the situation, but a great deal of educational work could be done by physicians as they go about. The greatest good, of course, will come not so much in explaining the lack of value in gas fumigation as in teaching the status of carriers, for unlike many teachings which have had to be unlearned, fumigation has done no greater harm than to lead to a false sense of security.

LETTER FROM OUR ASSOCIATE-AT-LARGE.

ODDITIES OF EGYPT.

Luxor, Egypt,

February 7, 1922.

The real tale of my adventures begins with our landing at Alexandria. The trip on the Adriatic, as one may judge from my first letter to the *JOURNAL*, was not an entire success, and the disembarkation at our first Egyptian port was a culmination of poor service on the White Star Line. Some six hundred of us were called for early breakfast, marched up one staircase and down

another for medical inspection—the doctor only looked at the young girls—then up again for visé to passport, which was perfunctorily done by a gorgeous official in a red fez, then down to the lower deck, where we were crowded for an hour and a half before we were allowed to go on the tender. There was a special train to take us to Cairo, scheduled to leave at 11 o'clock, and we reached shore just in time to scramble for seats. But we could not leave till our luggage came ashore and had been identified, passed through customs, weighed, registered and finally put on the train. An hour later the baggage tender came and dumped on the dock twelve hundred odd trunks and some two thousand pieces of hand luggage.

The charge of the six hundred at Balacava was nothing to the rush of the six hundred at Alexandria in an endeavor to locate their luggage. When found, it was necessary to lasso a porter with a coin, get him to carry it to the gate, bribe the official to pass it without inspection, get another porter to carry it to the registration office. There were two men to guess at the weight of all the luggage, charge you what they thought you would stand, then a third porter to put it on the train. All of this required five hours of strenuous work and in my own case required me to dispense with something like three hundred piastres in tips and fees—about thirteen dollars—and then the 11 o'clock train started. There were not enough seats and a friend and I, to find a resting place for our wearied bodies, went to the dining car, and in order to remain there till we reached Cairo we had to buy a lunch, an afternoon tea, three beers a bottle of wine and an after-dinner coffee.

Long after dark we reached Cairo and encountered several thousand wild Arabs fighting for our luggage with cries that would wake a mummy and after a free fight, a knock down and a hundred-yard dash combined with an obstacle race we reached the bus which was to take us to Shepheard's and here our troubles ended. Since then it has been one long dream of delight, a passing panorama of Oriental life. A wonderful picture of changing colors. Whatever I have said derogatory to Cook and his excursion robberies, I take it all back when speaking of his Nile trips. The boat, food, service and beauty of the trips are par excellence.

But I am ahead of my story. As I sit here writing while the rest of the party have gone on donkeys to see where Cleopatra entertained her friends some years ago, I can see the ship's library of some two hundred volumes, all on Egypt. If you want statistical, financial, historical or ethnological facts, I refer you to that library. What I write will be only what in a weak moment I promised your Editor I would do, and as a caption I would suggest, *Odd Things I Saw in Egypt*.

I am not strong on music but I believe there is a "ff" which means strong and forcible. I have already found a "ff" in Egypt and it stands for fleas and flies and the biblical plague of flies is better understood. Speaking of the Bible, there is in the Cairo Museum a papyrus called the Book of the Dead, and as we passed by, the guide explained to us how much of our knowledge of Egyptian lore was due to the facts discovered in its pages; and behind us were three ladies of uncertain age, but certainly English; one said to the others, "In that case is the Book of David, the Psalmist, and that is the original manuscript of the Psalms. When you get home you must tell Maria, she is so interested in the Bible."

Speaking of Maria reminds me of our first donkey ride into the desert to see the ruins of the old city of Memphis, of Sakara and the tomb of Ti. Some five thousands of years have elapsed since there was any life either in the city or tomb. We had four donkeys, named Black Diamond, Whiskey, Telephone and Maria. In spite of the name of the latter, his actions and bray gave rise to doubts regarding the sex of the beast and with his tendency to amble off the road to browse on the alfalfa and a desire to lay down and roll, Maria was not a success. When a six-foot man strides a donkey he either gets cramps in his legs or else ploughs a double furrow with his feet on each side of his mount. There is another feature of a twelve-mile donkey ride in its effects on a novice which modesty and a lack of knowledge of the Egyptian word for that part of anatomy forbids me to mention. In spite of these drawbacks, it was an enjoyable five miles into the desert, nothing but sand, not a vestige of green, passing on the way a camp of Bedouins, with their picturesque, gaily colored tents, their flocks of goats, donkeys and camels and a double measure of naked children. The tomb of Ti, discovered

only a few years ago, is one of the oldest of Egypt's old relics and the hieroglyphics and wonderful coloring in one of its chambers is a commentary upon the art and skill possessed by the Egyptians five thousand years ago and a contrast to the squalor and ignorance of the country to-day, were it not enlightened by a British protectorate.

Dendara, where we stay to-day to pay a call on Cleopatra, is a city of some three thousand people. There is, I think, about three houses which are not mere hovels of dried mud, some without roofs, all without furnishings of any kind, not a school, not a church; and not over one in a thousand can read or write Arabic. They all know one word, *Bakshish, they are all beggars, and aside from this word, which we hear on all sides, their language reminds me only of a man with quinsy, gargling his throat.

The Nile is Egypt, without it it would be an arid desert and they have certainly learned in the years of its history the science of irrigation. Since we left Cairo ten days ago, I have seen nothing modern until to-day. The banks of the Nile at this point rise in sharp cliffs about eighteen feet above the level of the water. The problem of getting water to the fertile fields beyond is the same as thousands of years ago and is solved in the same way as their ancestors. An excavation is made in the bank at the water's edge, forming a sort of well, then six feet above this another hole is made and a canal dug shorewards, then six feet higher a third. These wells are drained by pieces of burlap covered with mud and at each well are two palmwood posts connected by a horizontal piece of wood. On this as a fulcrum is a long well sweep, the counter weight being the roots of a young date, palms made heavy with dried mud. All this apparatus is kept in position by thongs made of palm fibre and at the end of the sweep is dependant a long stick with a stall bucket at its end. It is exactly as our own well sweep at home. These are in pairs and two men at the water's edge pull down the sweep, fill the buckets, and as they rise empty them into well

No. 1. There two men repeat the process to No. 2 and so on to the top, where the water is emptied into the irrigation ditches. These relays are from two to four, depending on the height of the bank. I have been interested in estimating the volume of water delivered by this method in the well just opposite the Sudan. There are eight men at work. The buckets hold about two gallons each, the pair four gallons, and it takes eight seconds to complete the process. Thus there is delivered by the combined labor of eight men thirty-two gallons of water a minute to the fields above. Allowing for an error of estimated quantity, it is safe to say that not over fifty gallons can be delivered.

Just above the landing place is a gasoline certified pump which supplies water to the city and delivers two thousand gallons a minute. This furnishes water for irrigation of fields not close to the water's edge and what the inhabitants use for drinking and cooking. They never bathe, if one may judge from their appearance.

After a somewhat violent altercation with the proprietor, I last night stepped into one of the houses to see what were the actual living conditions. A mud-walled house about twelve feet square, a roof of bamboo covering only a part, and within, in one corner a raised dais of mud about three feet square, a crooked stick stuck in the ground from which suspended an old five-gallon gasoline can and under it the remains of a fire. No windows, no floor covering, no seats, no table, absolutely all there was in this house, save two women and four children and a dog; the man of the house was outside and I don't see how he could well get in. Dirty, squalid, with their faces marked by pigment, and slashed by cuts, they gave me a decided repugnance to Dendara or Egypt as an abiding place.

They believe that by making certain cuts and stains on their faces, particularly on the temples, they can avoid disease and especially the ophthalmic, which is so prevalent in the country. . . . This interruption was when I went to my room to investigate a new kind of flea. This one was white, ordinarily they are black. As I was saying, ophthalmia is everywhere. Trachoma in its varying stages is so common that after a while one scarcely notices it, but walking the streets of Cairo or Asyut one meets scores of blind and sees hundreds of children with swollen, purulent lids, faces

*Pronounced Boksheesh—A cry for alms common to all languages through all Mohammedan country from the Dardanelles to the Straits of Malacca. One's very presence in the garb of respectability is in itself sufficient reason for tribute, the persistence exhibited in the collection of which would be worthy of a great cause.—(Ed.)

covered with flies and often no attempt made to dislodge them. The only wonder is that they are not all blind. I thought I saw the height of squalor in China, but in some portions of Egypt it is even worse. No wonder there is unrest in Egypt. I am restless myself, but that is probably due to the fleas. Wine is good and fairly cheap. The Danish beer is excellent and as one cannot drink Nile water, temperance pledges are broken daily and sometimes nightly as well.

We went one night to an Egyptian restaurant for dinner. We wanted then to get the true Egyptian flavor, we want now to restrict our eating to the excellent fare we get on the boat. This was the menu of a table d'hôte dinner: Soup made of the feet of young kids, and tripe very greasy, but eatable. Bread baked in large round masses. No butter, but you dipped pieces of bread in a dish of olive oil, beets and garlic. Calves brains rolled into little balls and fried in oil. Chopped goat cooked the same way. Salad of lettuce, all of doubtful cleanliness. Coffee, thick and sweet, eaten with a fork. Very good oranges, and all this for six piastres for one hundred and sixty piastres.

It was a goat dinner, not good dinner, and afterwards we all said ba-ba, never again. It costs fifty piastres to take a bath and there are several ways of doing it. You either strain the water or else allow the mud to dry on your body and then the boy comes with a stiff brush and cleans it off for you. It is the same price either way, although in the latter you have to tip the boy.

Of course, in Cairo we went to the Pyramids of Chiza, rode on camels and had tea at the Mena House, everybody does the same, but at my age the moonlight trips to the desert did not appeal to me and the scarabs and antiquities offered for sale had the flavor of Attleboro, so I bought none. At Asyut we met the shawl sellers and they did a thriving business with the ladies. They are very pretty but weigh a ton, more or less, and I shall probably have to pay excess baggage for the rest of my trip, but there is nowhere for sale any object characteristic of the country which appeals to me. Of the visit to Kanak Thebes, its temples and tombs, I have no time to write. You can get all information from Badeker on the library. Of more interest to me are the boats.

Photographs only can adequately describe them, but the feluccas, with their peculiar lateen sails,

their curious up-turned bows, wide gunwales on which they stand to pole the boat upstream, slowly drifting on the placid waters of the Nile, the green of the fertile planes, the yellowish brown of the surrounding mountains and above all the wonderful blue of the sky, at sunset changing to the hues of the rainbow, form a picture of the Nile never to be forgotten.

Had I the gift of words, I could not make a word picture adequate; were I an artist, I could not do it justice in a painting; a poet, I could not sing its praises in verse, but in memory it stands unrivaled. Never to be forgotten. The wondrous, the glorious Nile.

F. T. R.

LETTERS TO THE EDITOR.

To the Editor of the RHODE ISLAND MEDICAL JOURNAL:

While it is certainly true that there are some new things under the sun, it is rather surprising to discover how long ago one or another of our medical procedures was known to a few, at least, of our forebears. I am sending you the brief account which follows with the hope that it may prove to be, perhaps, of some interest to my ophthalmic colleagues if indeed they have not already come across it themselves. I am taking it from Dr. E. T. Withington's excellent Medical History from the Earliest Times.

William Fabry, of Hilden, near Dusseldorf, whose name is recorded in medical history as Fabricius Hildanus, was worthy to have been the Pare, or even the John Hunter of Germany; but he was unfortunate in the time of his birth, for the good seed he sowed fell on fields already planted with the tares of Paracelsic mysticism, and destined to be ploughed by the cannon of the thirty years' war. Though without a university education, he had gained an intimate knowledge both of Latin and Greek, and it was the object of his life to raise surgery to the dignity of a science, and the surgeon to the rank of the physician. His chief work was entitled "Six Hundred Surgical Cures and Observations," from which I am abstracting the following: On 25 April, 1624, he writes to a Dr. Hagenbach, regretting that an attack of gout prevented him from going to the latter's wedding, and in the spirit of the occasion he relates the following case as an example of the

advantages of being married: "A countryman, Benedict Barquin, bought some iron and was striking two pieces together to prove its quality. when a splinter flew into his eye and stuck in the cornea, causing him great pain. The local surgeons tried everything for many days to no purpose, and the pain and inflammation so increased that he came to me at Bern on 5th March. I used all means I could think of for some days, but the splinter was so small that it could not be removed by instruments. When behold! my wife hit upon the very thing. I kept the eye open with both hands, while she held a magnet as close as possible to it, and after several trials (for he could not stand the necessary light long) we saw the iron leap from the eye to the stone."

This ingenious lady was a French Swiss from Geneva, named Marie Calinet, who, in her husband's absence, could treat not only diseases of her own sex, but even cases of fractured ribs and legs, and as the above instance shows, she would make an excellent person to have about the office of an oculist.

JOHN DONLEY.

Baltimore, March 27, 1922.

To the Editor of R. I. MEDICAL JOURNAL,

Dear Sir: The book on "The Physician Himself," of which I am the author, has been out of print for nearly three years.

In view of the widespread good it has done our guild as a unit, and its usefulness to the individuals who possess it, The F. A. Davis Co., for a small money consideration, returned its copyright to me more than a year ago.

Glad of the chance to use my pen on it again, I have given it a searching farewell revision, eliminating much that was obsolete, and adding a great deal that is useful in an attempt to make it as pure, refined and clear cut as the classics. I have named this "The Crowning Edition." It was issued from "The Lord Baltimore Press" yesterday and a copy for you is already in the parcel post. I hope you will scan it closely.

I trust its unique theme and useful mission may mingle with your other thoughts. * * * The expense of producing the book has been far greater than expected, but if its sales bring me out even, I shall be satisfied.

Very sincerely yours, etc.,

D. W. CATHELL, M.D.

Emerson Hotel, Baltimore, Md.

SOCIETY MEETINGS

RHODE ISLAND MEDICAL SOCIETY.

A meeting of the "Section in Medicine" of the R. I. Medical Society was held at the Medical Library, Francis Street, Tuesday, March 28, 1922, at 8:45 P. M.

Paper: "Faulty Postures," Dr. Lloyd T. Brown of the Harvard Medical School.

Collation followed.

CREIGHTON W. SKELTON, M.D., *Sec.-Treas.*

PROVIDENCE MEDICAL ASSOCIATION.

Monthly meeting was held Monday, March 6, 1922, at Rhode Island Medical Society Library, Francis Street, at 8:30 P. M.

Program: Paper—"X-ray Treatment of Tonsil Infections," by Dr. Isaac Gerber.

Paper—"Significance of Bladder Symptoms in Women," by Dr. Eric Stone with the collaboration of Dr. James A. McCann. Case studies of patients seen in the O. P. D. Rhode Island Hospital.

Discussion opened by Dr. J. Edwards Kerney. The Standing Committee has approved the application of Louis I. Kramer, M.D., 304 Smith Street. Collation followed.

PETER PINEO CHASE, M.D., *Secretary.*

WOONSOCKET DISTRICT SOCIETY.

Regular monthly meeting of the Woonsocket District Medical Society was held at St. James Hotel at 4 P. M. February 23, 1922. Routine business was transacted.

Paper on X-ray diagnosis and treatment, with lantern slides, was read by Dr. Charles Whelan of Boston, Mass. Collation followed.

A. H. MONTY, M.D., *Secretary.*

HOSPITALS

PROVIDENCE CITY HOSPITAL.

CASE REPORT.

Acute pancreatitis is recognized as a complication of mumps, but occurs so infrequently that it is an object of interest when recognized.

A. S., eleven years old, male, admitted March 20, 1922, second day of illness with bilateral swelling of parotid glands. Five days later swelling

gone but still slightly tender. Temperature suddenly jumped to 103.6 with severe abdominal pain and vomiting. Bowels moved three times. Pain general throughout abdomen, but most severe at left of umbilicus. White count 7500, increased to 11,000 in twenty-four hours. Urine showed no sugar but phenylhydrazin test was positive. Stool showed increased amount of fat. Pain lasted 72 hours, and temperature dropped by lysis, becoming normal in 72 hours. Patient discharged one week later apparently well.

HARMON P. B. JORDAN, M.D.

NOTES.

The regular monthly meeting of the Staff Association was held on March 15th, at which time a complete report was made of the patients treated in 1921 by the departments of Dermatology and Syphilis and Neuro-psychiatry in the Out-Patient Department, and of the venereal disease patients treated in the hospital. Case reports were presented by the Department of Neuro-psychiatry.

ETHER AND LAVENDER

Paradoxical as it may seem, if we are to believe the public print, divorces in Rhode Island exceed in numbers, the marriages.

A recently returned traveller tells us that one can live in Albany upon half the cost of living in Providence—it costs only \$10.00 to spit on the sidewalk.

That liberal use of cosmetics is held in great esteem by the female of the species along Broadway, New York.

That "Youth is Served" more fearlessly and more bountifully in Windsor, Ontario, than in any city in the United States.

That he saw a bald-headed man from the States in Montreal with the number of his hotel room painted on the top of his head as a precautionary measure, lest the climate and other things affect his memory.

SYNTHETIC FOOD.

Although he is said to have predicted it, Dean Kimball of Cornell University says it is foolish—so report goes.

Why matter add that it is belated as well; the whole matter was a finished achievement long before the Dean was born. Boarding-house keepers called it Hash.

HEALTH NOTE.

Never permit a careless person to push you in front of a train.

NOTICE.

NATIONAL BOARD OF MEDICAL EXAMINERS.

The dates for the next two examinations of the National Board of Medical Examiners are as follows: Part I. and II., June 19, 20, 21, 22, and 23, 1922. Part I. and II., September 25, 26, 27, 28, and 29, 1922.

Applications for the June examination should be in the Secretary's office not later than May 15th, and for the September examination not later than June 1st. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

J. S. RODMAN, *Secretary*.

1310 Medical Arts Building,
Philadelphia.

(Continued from Page 244)

ing symptoms may not be the result of syphilis which may be shown only by a positive Wassermann reaction.

A small amount of treatment rarely has any effect upon the Wassermann reaction but when a patient has had a considerable amount of treatment, the Wassermann reaction will vary from negative to positive on succeeding days. In such a case a negative Wassermann reaction has little significance.

A Wassermann reaction may be consistently negative in the presence of syphilis. This is particularly true in syphilis of the central nervous system, where the blood Wassermann reaction may be negative while the Wassermann reaction in the cerebrospinal fluid is positive.

A negative blood Wassermann reaction should never be considered as strong evidence against the presence of syphilis of the central nervous system. Where it is suspected, a lumbar puncture should be performed.

In cases of central nervous system syphilis receiving treatment the reactions in the blood and cerebrospinal fluid do not run parallel. In some cases the Wassermann reaction in the blood becomes negative while the reaction in the cerebrospinal fluid remains positive. In other cases the reverse is true. The value of the provocative Wassermann reaction is questionable. It is probable that the same result could be obtained by several repetitions of the test.

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ORIGINAL ARTICLES

SIGNIFICANCE OF BLADDER SYMPTOMS IN WOMEN.*

BY DR. ERIC STONE AND DR. JAMES McCANN
PROVIDENCE, R. I.

This paper is the result of certain theories concerning out-patient work which Dr. McCann has held since an investigation of similar work in clinics of other cities was carried on by him some years ago at the instigation of the Gynecological Staff of the Rhode Island Hospital. He felt that the out-patient service, as well as the individuals conducting it, would benefit if each member, besides carrying on the routine procedure of his department, made a study of some special phase of that work. Accordingly, we decided to make a more careful out-patient study of women with bladder symptoms than had formerly been carried on. This has been done with the accumulation of 63 unselected cases, taken as they presented themselves at the clinic. These cases have been given as thorough a gynecological and urological examination as possible. This included physical examination; chemical, microscopic and bacteriological examination of the urine; and cystoscopy in all cases; ureteral catheterization in 39 cases, pyelography in 12, and genito-urinary plates in 18 other cases. The ureteral catheterization involved in each case microscopic examination of the divided urines, with necessary cultural and staining methods of bacteriological diagnosis, and a determination of the divided renal function.

While nothing particularly new or novel has emerged from the study, certain general principles may be stressed which are of interest to the practitioner, the gynecologist and those interested in out-patient work. 1st. Of the 34 cases presented with a diagnosis already made, 38% were incorrect because of lack of urological examination. 2nd. One in five were presented as a cystitis when

the bladder symptoms masked a more important condition in the upper urinary tract or in the pelvis. 3rd. Urological examination saved five patients a surgical attack on appendix or tubes or normal ureter. 4th. The importance of the cystoscope in the armamentarium of the gynecologist is clearly shown; and finally, the feasibility of this work in office or out-patient department is demonstrated.

The symptoms to be discussed are arbitrarily fixed as follows: 1. Pain in the region of the bladder; 2. Frequency and burning of micturition; 3. Sense of a residual urine; 4. Retention of Urine; and 5. Incontinence of urine.

Twenty-seven of the cases in our limited series complained of pain in the region of the bladder. In 18 of these, cystoscopic examination revealed marked changes in the trigone, including elevation, hyperaemia, cystic oedema or combinations of these. In seven the pain was preliminary, in nine it was terminal, in two it was sensed throughout the act, while in nine it was constant, lasting up to or nearly to the next micturition. Of those complaining of preliminary pain, the chief lesion was trigonitis in five and acute urethritis in two. When the pain was terminal, there was a greater diversity of etiology; four presented ulcers in the urethra near the sphincter, three had a generalized chronic cystitis, one suffered from acute urethritis and the last was a case of submucous ulcer.

These findings are readily explained by a study of the anatomy and physiology of the bladder, especially of the trigone and the sphincter. The trigone forms the floor of the bladder when the woman is in the upright position and is morphologically similar to a funnel, carrying the urine from the vesicle fundus to the urethra. It is a group of muscle bundles continuous with the muscle fibers of the ureters and streaming down from either ureter, intermingling in the midline and passing to the urethra inside the internal sphincter on the sphincter's posterior segment. The trigone is laid on the normal bladder musculature and may be lifted bodily from it. Nerve ganglions and sympathetic fibers are present in the trigonal muscles, while the bladder wall is supplied by sym-

*From a clinical study of selected cases in the Gynecological Out-Patient Department of the Rhode Island Hospital. Read before the Providence Association March 6, 1922.

pathetic and parasympathetic fibers, which probably explains why the trigone is the most sensitive part of the bladder. In spite of the prevailing belief to the contrary, micturition does not take place through the inhibitory action on the sphincter. It is brought about by a contraction of the trigone, which passing as it does through the less powerful muscles of the sphincter, pulls these weaker arcuate fibers apart⁷. The flow of urine then follows under the pressure of the contracting bladder muscles, aided by voluntarily increased intraabdominal pressure. The response of this structure to infection is oedema, hyperaemia and infiltration with leucocytes.

It is not then surprising that five out of seven cases complaining of pain at the onset of micturition showed a stiff, oedematous trigone, which gave severe pain when powerfully contracting to open the vesicle neck. The other two cases had acute urethritis with inflamed walls that were sensitive to the passage of foul, acid urine.

The same correspondence is seen between symptomatology and physiology in the cases having pain at the end of micturition. Four had ulcers of the urethra so close to the sphincter that they were pinched in the contraction of the released internal sphincter at the cessation of flow. In all the other cases, save that of submucous ulcer, there was present a generalized cystitis which the muscles of the bladder wall traumatized while contracting and the approximated surfaces of which were sensitive when brought into apposition on emptying the bladder.

Thus it is seen that the pus in the urine is not the cause of the pain, which is due to inflammatory changes in the bladder structures, most frequently in the trigone.

FREQUENCY AND BURNING.

Twenty-two cases entered with the chief complaint of frequency and burning on micturition. All but three of these cases had marked changes in the trigone. One of the cases in which the trigone was normal was an early acute gonorrheal urethritis, while another was a case of acute streptococcus pyelonephritis, with marked reflex bladder symptoms; but too early for noticeable changes in the bladder. The third was a case of nephrop-tosis with intermittent hydronephrosis, cystoscoped in an interval between attacks.

In 14 of these cases there was no local or gen-

eral infection of the fundus of the bladder. The symptoms were dependent on the irritation of urine in contact with the inflamed, sensitive and intolerant trigone. These observations are made understandable by again turning to the morphology and physiology of the trigone and its vicinity. The trigone is the most actively functioning part of the bladder and so has the least opportunity to rest when infected. Indeed, the irritability produced by the inflammation increases its activity. This hyperfunction would tend to aggravate and keep active any infection in the region of the trigone and presents a partial explanation of the high trigonal morbidity. Furthermore, the mucosa of the trigone is without a submucosa such as is found in the rest of the bladder; and there are many layers of epithelial cells instead of the three layers in the mucosa of the fundus. This prevents the free movement of the mucosa over the moving muscles, so subjects the mucosa to more trauma than is suffered by that of the fundus. Moreover, the larger vessels of the blood supply of this viscus enter at the bladder neck, and in the female at this region are the important anastomoses with the uterine and vaginal vessels. There are two sets of lymphatics in the bladder, one in the mucosa and one in the muscularis, the former being particularly developed in the trigone. While it would seem that this would enhance rather than impede recovery from infection, this is not the case. The engorgement of the vessels and the blocking of the lymphatics found in the region of any infection occurs in this area also and leads to a relative or complete obstruction which increases the oedema of the trigone. Furthermore, the position of the trigone favors infection. The urine from the kidneys is poured onto it, even when supine if the body is at rest sediment falls onto the trigone, and when the bladder is only partially filled the trigone is covered by the largest amount of urine, the mucosa of the fundus being protected by folding on itself. Somewhat in corroboration of this is the finding of the signs of marked infection or chronic infection, such as oedema and polyps, is most frequent in the trigone. In our series four polyps were found, all of them occurring on this structure. In short, it is plausible to assume that the trigone is more susceptible to infection than the other parts of the bladder.

The fact of anastomoses with the uterine and vaginal vessels explain the appearance of the symptoms under discussion in women where there is no infection in the bladder or in any part of the urinary tract. In the present group of cases eight such cases were seen. These included four of endocervicitis, two of chronic pelvic inflammation and two of varicose veins of the broad ligaments, in one of which there was a pelvic phlebitis. While in the cases of chronic pelvic inflammation there may have been an element of irritation of the neighboring muscularis and mucosa, yet it was so mild that there was no sign of inflammation to be seen on the inside of the bladder. So it seems fair to at least suggest that the bladder symptoms were caused by the participation the bladder vessels took in the engorgement of the pelvic vessels. Indirect support of this view is found in the fact that in eight of the cases discussed in this and the next two paragraphs an increase in vesicle symptoms was observed at the approach of the menses.

Another cause of frequency and burning, as well as its underlying cause, trigonitis is illustrated by those cases having marked cystocele. We had the opportunity of observing four of these. The trigone is carried down and back so that its muscles work at a mechanical disadvantage. The ureters are also drawn down and this traction and torsion may result in partial ureteral obstruction². In one case a pyelitis resulted from this ureteral urinary stasis and in a second the dragging was so marked that the ureteric orifices faced backward and could not be catheterized.

In two cases the cervix of a uterus which was retroverted but not also retroflexed was seen to press up on the trigone and cause by its elevation not only oedema of that structure but sacculation of the bladder. In another case a large fibroid of the uterus not only limited the capacity of the bladder but because of the share the trigone vessels took in the general pelvic congestion it produced such oedema of the trigone that at the time of the menses there was complete retention which necessitated catheterization of the bladder. In this case there were no leucocytes in the urine and the urine was sterile.

The effect of the pregnant uterus on the bladder is too well known to require discussion of the two cases which consulted us for the relief of this

pressure cystitis. In neither of these cases did it happen that the condition was purely mechanical, for in one there was a symptomless pyelitis on one side with mild infection of the bladder urine; and the other had a gonorrheal uretheritis and cystitis. In both cases the trigonitis, that our hypothesis of its basis in part in concomittant pelvic engorgement would lead us to expect, was a prominent feature of the bladder picture.

In several instances in discussing the etiology of bladder symptoms reference has been made to pyelitis. Of 18 cases of pyelitis found in this series seven were accidentally found in routine urological examinations, as the condition was entirely masked by the bladder symptoms. With these may be mentioned three cases of tuberculosis of the kidney, in only one of which was there any pain in the kidney region. The most marked symptoms in these cases were those associated with the bladder infection; the two others presenting bladder symptoms alone. The period between the onset of symptoms and correct diagnosis is of interest as it illustrates the error gynecologists may fall into when gynecological examination alone is depended on. In one the period was 10 years, in another four years, and in the last, four months.

Four of the cases of pyelitis were bilateral and in each case associated with a marked chronic cystitis; the bladder symptoms alone were present in three of the four, in the other there was occasional pain in the region of the kidneys. In one the bladder symptoms had been present intermittently for 20 years and constant for 10. The others showed a period of morbidity of four, three and two years. The point of interest is that they all had received bladder treatments throughout these periods with no attempt at kidney examination.

Fourteen of the pyelitis cases were one-sided. Eight of these showed some cause for permanent or temporary urinary stasis on the affected side. Three had marked ptosis, two passable ureteral strictures (right-sided in the normal iliac constriction of the ureter), in one a stone obstructed the flow of urine. Pregnancy accounted for the obstruction in one. Possible causes of temporary stasis were found in two others, i. e., marked cystocele and chronic salpingitis on the affected side. These findings are of interest in relation to a recent article by Crabtree and Shedden³. These

authors point out that pyelitis is a chronic condition usually finding its source in some acute kidney infection which resolves itself into a simple infection of the pelvis. Their important contribution is the explanation of the fact that so often only one kidney is involved or if both are acutely infected only one has a persistent pyelitis. They conclude from a study of a large series of cases that the determining factor is urinary stasis. The most frequent cause is nephroptosis; even when it is so slight that drainage is free part of the day so that hydro- or pyonephrosis does not develop.

In view of this and the frequent masking of the pyelitis by the cystitis it causes and of the frequent occurrence of nephroptosis in women (22%, as compared with 2% in men)¹, this subject is important to the gynecologist. The reason of this preponderance in the female is that in women the kidney bed is shallow, and more open than in men. The important adjunct of abdominal tonicity and its resulting interabdominal pressure is lacking in part due to pregnancy, use of corsets, and lack of exercise. The most typical type of case is in the thin, anaemic woman with poor fat deposits, whose tendency to kidney ptosis is further increased by poor development of the fatty capsule of this organ. Another type of case is the stout woman with a heavy caecum pulling the kidney down by traction on the nephrocolic ligament.²

SENSE OF RESIDUUM.

Six of the cases seen by us in this series were troubled by a sense of residual urine. Five of these had a highly infected urine. In two cases a cystocele was present as part of a lacerated perineum and relaxed pelvic floor. One of these patients had made the interesting observation that by pressing on the anterior vaginal wall with her hand at the end of micturition a little more urine was expressed and this annoying symptom was headed off. In two others oedema of the trigone was sufficiently marked to cause sacculation of the bladder and prevent its complete emptying. A fifth case was that of gonorrheal cystitis complicated by pregnancy. The last of the group had a stricture of the bladder. In short, this symptom is easily explained on mechanical grounds, and its acuteness is increased by infection of the residual urine.

INCONTINENCE AND RETENTION.

Incontinence and retention of urine, unless caused by central nervous system lesions, none of which occurred in this series, is easily also explained on mechanical and anatomical grounds. Only two of our cases were troubled by retention. One was the case of fibroid uterus with marked hypertrophy of the trigone, which was discussed in an earlier paragraph. The other case was that of urethral stricture which caused obstruction enough to make micturition difficult at all times and cause retention at those times when increased inflammation or congestion completed the obstruction.

Incontinence is a subject of considerable importance to the gynecologist as it is so frequent an accompaniment of cystocele and follows many operations for repair of the anterior vaginal wall. Four of the cases under discussion had marked cystocele, only two of which complained of incontinence. Both of these in cystoscopy showed a widely relaxed sphincter. Our examinations were done with the far vision cystoscope so that the condition of the urethra was not determined. Young has observed in similar cases that the dorsal wall of the urethra shares in this relaxation and becomes longer and is ballooning⁶. It takes a horizontal position and loses the support of the tissues in the triangular ligament. This atonicity permits an escape of urine on sneezing, coughing or jouncing. In one of our cases the patient had a markedly contracted bladder dependent on a cystitis of 15 years standing and augmented by scarring following two vesicle operations. The result was an incontinence due to overflow, the bladder permitting escape of fluid as soon as 30 cc. of urine had collected. The fourth case was similar, being that of the girl with gonorrheal cystitis and a pregnant uterus which limited the capacity to 60 cc. Again, then we have met a symptom based on mechanical factors, with infection playing a part of but secondary importance.

If from so small a series of cases any deductions are permissible, they are as follows:

1. The short urethra, poorly supported posterior wall of the bladder, proximity of vagina, cervix, uterus and tubes all liable to infection, the possibility of tumor formation in the uterus, cervix and ovaries, anastomoses with uterine and

vaginal vessels, and tendency to nephroptosis and kidney infection tend to make the bladder of women an organ peculiarly prone to urinary stasis and infection.

2. The proximity of the above structures and the pathological processes in them often set up a series of urinary symptoms which make differential diagnosis difficult.

3. Bladder symptoms are in many cases a mask of more important conditions which are extravescicle, in some even entirely outside the genito-urinary tract.

4. Symptoms are not so much produced by the original infecting process as by pathologically changed structures which produce the symptoms mechanically, as the stiff oedematous trigone, the ptotic kidney, the cystocele or the enlarged uterus.

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THE TREATMENT OF EAR INFECTIONS IN CONTAGIOUS DISEASES.*

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All members of the profession, and particularly those interested in otology, are aware of the incidence of middle ear infection in the course of the acute infectious diseases of childhood. In the long discharging ears of adults, a careful history shows, in most cases, that the original ear infection began during one of the exanthemata of childhood.

In many of these cases, the ear discharged continuously; some have discharged periodically; and the neglected cases show extensive destruction of drum membrane and ossicles. When polypi and cholesteatome are present in addition, the ear becomes a very dangerous one, and besides the loss of hearing that results, a radical mastoid with its

dangers, difficulties, and disadvantages, is necessary often to save life.

In a survey of what is done to prevent this common type of ear trouble in our best contagious hospitals, we found that little effort was expended to correct these unfortunate results following acute middle ear disease from the exanthemata.

As a rule, an acute otitis media, developing during one of the contagious diseases is promptly incised, when recognized early, or ruptures spontaneously, if unrecognized. The ear is then irrigated or wicked frequently and general attention (rest, liquids, cartharsis, etc.) is carried out. When the pain and temperature subside, and the discharge decreases, little attention beyond this routine treatment is given to the ear condition. In spite of this routine, often poorly executed, a certain large proportion heal spontaneously, while many continue to discharge mildly, and attention is diverted to the heart, lungs and kidneys, for the feeling prevails that a discharging ear, without temperature, tenderness, and edema takes care of itself, and that attention should go to watching for and treating other complications of the disease. It is neglect of the ears at this time that probably paves the way for many of these serious discharging ears of adult life.

It seems well founded that in such diseases as scarlet fever and measles, that the progress of destruction of ear tissues is very rapid, and when fulminating mastoid signs develop, operation is fortunately done promptly. Rarely do we find this type of ear, in which simple mastoid was necessary, among the chronic discharging ears of adult life that come to us.

Our investigation tends to show that cases requiring operation leave the hospital with dry ears and much saving of ear structure, and fare better than the cases that drag along with mild discharge.

It is our purpose to show that all ears that continue to discharge after four weeks, without other visible signs of mastoid involvement, need conservative operative treatment, regardless of the infection, but this should be particularly early and prompt in ears of contagious origin.

In general practice, even less is done than in the hospitals to follow these acute ears. After the acute stage has passed, the discharge is allowed to continue because it is inoffensive and is consid-

* Read before the R. I. Ophthalmological and Otological Society December 13, 1921.

ered in rather a light way by physicians in general. To illustrate, a young, well-trained surgeon, in discussing chronic suppurating otitis media, told me that he seldom saw any trouble from this type of ear. He had known many people who had such ears for years, and except for the discomfort of cleansing them, the occasional odor, and some loss of hearing, they were none the worse for them. When an opinion of that type, and we hear it often, is forthcoming from men of standing in the profession, what an insignificant place these ears have with the medical men in general. We, the otologists, know that complications from these ears in later life are as serious as those of heart, lungs, kidneys, or any other complication of contagious disease that would tend to invalid the patient, or cause his sudden demise. Cases of meningitis, brain abscess, facial paralysis, or sinus thrombosis, resulting from these ears and requiring serious operations, may be rare in any one man's practice, but in a large ear clinic, they are common, and someone has likened these ears to a gasoline tank exposed to a constantly present flame, in that it is unknown when the flare up will come. This is especially true where irrigations and swimming are indulged in.

From still another standpoint, though secondary in importance to saving hearing and life, these ears that continue to discharge for weeks and weeks after the time for normal healing has passed, become a burden to the municipal contagious hospital. That they are a source of infection in spreading these diseases is certain. Accordingly, these patients must be kept isolated for a long time, when other factors of the disease have cleared up. This does not hold true in measles, in which disease the discharging ear or nose does not seem to transmit the infection, except in the first few days of the disease. It is particularly true, however, in scarlet fever and diphtheria.

One case of scarlet fever at the City Hospital, with suppurating otitis media, in which the ear discharged five months, was sent home. In a short time, other members of the same family were admitted with the same disease. When the discharge becomes non-infectious with the possible exception of diphtheria, cannot be determined, but in scarlet fever it is very long. An early healing is desired then to prevent the spread

of the diseases and lessen the stay in the hospital as well as to preserve hearing and health.

It is generally believed that ear infection in contagious disease is so virulent at times that a great deal of destruction to tissue ensues in the first few days. Also, that the severe toxemia rapidly affects the auditory nerve, and hearing is blotted out in the beginning. That this takes place in some cases cannot be denied. It has not been my experience to see many such cases and I believe that they are few as compared to cases that arrive at the same condition from long continued discharge and neglect. Even this fulminating type would probably be rendered dry and less dangerous by an early simple mastoid operation. If this did not dry up the ear, and a radical operation became necessary later on, part of the work has been accomplished thereby and time saved.

To cope with middle ear infections in contagious diseases at the Providence City Hospital, the following plan was worked out with Doctor F. N. Bigelow, Chief of the Aural Service, and Doctor D. L. Richardson, Superintendent. All cases of acute otitis media developing in the contagious wards are incised promptly. If they rupture spontaneously, they are also incised, as such an opening is seldom adequate for drainage, and results in sloughing of a large area of drum membrane, which is replaced in healing by less resisting scar tissue with adhesions. The ear is then irrigated or wicked frequently, and kept as clean as possible. General treatment is added (fluids, ice-bag, rest, etc.). Unless mastoid signs appear, this routine is kept up for about two weeks. If there is a free discharge after that time, in spite of ample drainage and care, the adenoid tissue and tonsils are removed, the belief holding that much of the infection rests in the large adenoid tissue and tonsils in these cases. Since it takes about a week for the resulting blood clot in the nasopharynx to resolve, no great improvement could be expected before that time. Hence, the ear treatment is kept up during this interval, and the amount and character of the discharge is observed carefully during the next (fourth) week. If free pus continues then, a simple mastoid operation is performed. If the discharge lessens and becomes mucoid in character after adenoid removal, a little longer time is allowed for healing.

This time schedule is not adhered to closely, and may be varied according to the individual case, i. e., (the type and location of perforation, the character of the discharge, and rapidity of destruction, etc., being considered). It is outlined to show that these ears have been well cleaned up by following such a plan. That they may discharge for a longer time and still be checked by simple mastoid operation is shown in the following cases of this short series.

Case 1544, A. D., 5½ years old. Diagnosis: scarlet fever. Admitted March 24, 1921. Both ears discharging freely through large central perforations; no tenderness or edema over mastoid. The ears continued to discharge in spite of routine treatment, and on April 12th, tonsils and adenoid were removed. There was no improvement noted, and on April 29th, a double simple mastoid operation was performed. On May 24th, less than a month later, the patient was discharged with dry ears and mastoid healed.

Case 15824, R. K., 4½ years. Diagnosis: scarlet fever. Admitted July 2, 1921. Three months previous to admission, patient had scarlet fever and both ears discharged. The left healed spontaneously, but the right continued to discharge. Tonsils and adenoid were removed cleanly one month before admission with no change in discharge from right ear. There was no swelling, tenderness, or other mastoid signs aside from the discharge. July 3, 1921, right simple mastoid operation; July 12th, right ear dry and mastoid wound closing rapidly. Patient was discharged from the hospital on July 14th with ear well. This discharging ear was of three months' standing, and showed no tendency to heal, until mastoidectomy was done.

Phillips, Hays, Dench and a score of other otologists have emphasized strongly the value of a simple mastoid operation to terminate a discharge and save hearing in those ears that fail to heal promptly after a few weeks of discharge, whether or not other signs of mastoiditis were present.

Because of the destructive nature of infection in contagious disease, I believe intervention should come even earlier than they have advised; when the discharge is mucoid in type, adenoid removal will often suffice, and should be tried first in all types, but when free pus continues in spite of this, no time should be lost in doing a conservative

mastoidectomy. The operation is done often enough where there are acute signs present, but not frequently enough in the subacute types to save hearing, as few can be brought to allow operation on the mastoid, unless there seems a danger to life, with temperature and edema and redness, etc. The public should be educated to the fact that the mastoid operation is most valuable as a hearing-saving device.

Since most of our patients have been children in whom the infantile type of mastoid prevails, there was little else found at operation than the antrum cell, and a few smaller cells scattered about it. Pus or granulations were found in every case in the antrum. The operation is not a formidable procedure in children, if care is taken about the middle ear, where there is danger of dislodging the incus in curetting. In these reported cases, there were no operative complications. The operation can be done rapidly, is followed by very little reaction, and should not be termed a mastoid operation. The public in general are too awe-struck by the term, and frequently the parents refuse permission to operate because of the horror it implies to their minds. It should be termed incision of postaural abscess or postaural incision, or some such term. They will more readily assent to its being done in that event.

The healing has been prompt whenever careful attention has been paid to the post-operative dressings. In one case, in which the ear wick was allowed to buckle in the canal, a pool of pus was present from day to day. Carefully placing the wick so that its tip rested against the drum and changing it frequently, brought about prompt healing. This was a case of long standing and it was thought the simple operation was done too late to effect a healing. When the patients have been old enough, hearing has been tested by whispered voice and found good.

There is little doubt that the simple procedure of removing the adenoid and tonsils is responsible for cleaning up many of these ears, because most of the infected material is in the adenoid and tonsils. Their removal as a routine in these contagious diseases is not far off. Certainly any child that has had measles, scarlet fever, etc., whether the ear has been infected or not at the time, should have these lymphoid structures removed before leaving the hospital for home. These harbor the

infection, even when the ears are uninvolved, and are no doubt responsible for spreading infection as well as causing many chronic catarrhal ears of later life because of the infection that remains dormant in them indefinitely. Occasionally the sinuses are infected and the thought probably comes to you that these are more responsible than the tonsils and adenoid, for the profuse nasal discharge that follows these diseases. It has been our experience that a nasal discharge rarely continues after adenoid removal. We conclude, therefore, that the sinuses are seldom responsible. With the procedure outlined above well carried out, there will be fewer chronic ear cases in adults, both suppurative and non-suppurative. True, a few normal tonsils may be sacrificed by making removal of tonsils and adenoid a rule, but when we consider how unfruitful is the treatment of the chronic catarrhal ear, our best efforts should aim at prevention. We are starting in the right direction when removing tonsils and adenoid, which we know by virtue of having been infected during contagious disease, are an early source of infection for ears, and remain so for a long time.

In 129 cases of otitis media suppurata occurring in the contagious wards of the Providence City Hospital in past two years, eighty cases healed spontaneously under careful routine treatment with no other operative measure than paracentesis, and left the hospital with dry ears. These cases should have had tonsils and adenoid removed before leaving the hospital, I believe, to prevent re-infection of the ears, and I hope we may add this feature to our plan shortly. In sixteen cases, removal of tonsils and adenoid proved sufficient to heal those acute ears that did not yield to routine treatment. Ten cases continued to discharge in spite of tonsillectomy, and in these the simple mastoids were performed. Eight of these cases left the hospital with dry ears within a month of operation. Two were discharged against advice before a month with mild discharge from the ears.

The foregoing procedures account for one hundred and six of the total number. There were nine deaths from other sources in which there were discharging ears. Nine discharging ears were discharged improved where no operative measures were done, before this plan was followed, and five cases were unimproved. No operations. (No permission for operation.)

The cases were distributed as follows: scarlet fever, 49 cases; measles, 37 cases; diphtheria or diphtheria carriers, 34; pertussis, 3; influenza, 2; chicken-pox, 2; erysipelas, 2; total, 129.

The mastoid cases were from the following diseases, scarlet fever 5, diphtheria or diphtheria carriers 2, measles 3. It is hardly fair to test the efficiency of such a plan on so few cases, yet the results thus far have been so encouraging that a preliminary report seemed worth while to stimulate other workers with ears in contagious cases to try out the plan. As yet, we have not found any ears that did not respond well to this treatment. Since this procedure of following up discharging ears will be continued, further reports will be forthcoming, and its true worth will be tested in the event of a very severe epidemic of one of these diseases. It goes without reserve, however, that nothing has been lost by following this plan thus far. In the event that the ear continues to discharge in spite of this method of operating upon it, a radical mastoid, if required later, is made easier to do by the steps already taken.

CONCLUSIONS.

1. That many suppurating chronic ears of adult life originate during the contagious diseases of childhood, and cause as much serious trouble in later life as any of the sequelae.

2. A great deal of attention is paid to the general condition (heart, lungs, kidneys, etc.) and little to an otitis media after the acute stage has passed, unless fulminating mastoiditis develops.

3. That these long-discharging ears, except in measles, are a source of spreading disease and require prolonged isolation, and unnecessary expense to the municipal hospitals.

4. That in many cases of middle ear disease in the exanthemata, the destruction and damage does not result in the first few days, but takes place slowly from a neglected discharge that persists because infection continues unrelieved in the adenoid and tonsils, or mastoid antrum and cells.

5. That the simple mastoid operation in these children is not a formidable procedure, and the public should be taught that it is a measure required to save hearing as well as life. It should be termed "post-aural incision" instead of "mastoid" to allay the public fear in case of children.

6. That most of the infection is located in the adenoid and tonsils (not in sinuses) and these should be removed routinely, after infection with contagious disease has passed, if not during the disease.

7. That the type of conservative surgery outlined in this paper causes no damage and paves the way for radical operation, should that prove necessary at a later date.

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FRANK E. PECKHAM	<i>1st Vice-President</i>	Providence
ARTHUR T. JONES	<i>2nd " "</i>	Providence
JAMES W. LEECH	<i>Secretary</i>	Providence
WINTHROP A. RISK	<i>Treasurer</i>	Providence

DISTRICT SOCIETIES

KENT

Meets the second Thursday in each month

J. F. ARCHAMBAULT	<i>President</i>	Arctic
DANIEL S. HARROP	<i>Secretary</i>	Riverpoint

NEWPORT

Meets the third Thursday in each month

NORMAN M. MACLEOD	<i>President</i>	Newport
A. CHACE SANFORD	<i>Secretary</i>	Newport

Section on Medicine—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.

R. I. Ophthalmological and Otolological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. C. J. Astle, President; Dr. J. L. Dowling, Secretary-Treasurer.

The R. I. Medico-Legal Society—4th Thursday—January, April, July and October. Dr. Roswell S. Wilcox, President; Dr. H. S. Flynn, Secretary-Treasurer.

PAWTUCKET
Meets the third Thursday in each month excepting July and August

JOHN F. KENNEY	<i>President</i>	Pawtucket
A. H. MERDINYAN	<i>Secretary</i>	Pawtucket

PROVIDENCE

Meets the first Monday in each month excepting July, August and September

N. DARRELL HARVEY,	<i>President</i>	Providence
P. P. CHASE	<i>Secretary</i>	Providence

WASHINGTON

Meets the second Thursday in January, April, July and October

ASA S. BRIGGS	<i>President</i>	Ashaway
W. A. HILLARD	<i>Secretary</i>	Westerly

WOONSOCKET

Meets the second Thursday in each month excepting July and August

EDGAR F. HAMLIN	<i>President</i>	Slatersville
A. H. MONTY	<i>Secretary</i>	Woonsocket

EDITORIALS

PREMEDICATED ALCOHOL.

To define premedicated alcohol, it is only necessary to say that it must contain, upon leaving the distillery, enough of some ingredient (presumably medicinal) that enters into the finished medicinal preparation, as to render it unfit for beverage purposes; after this has been done, alcohol becomes tax free.

It has been whispered somewhat loudly in the ear of the Secretary of the Treasury and the pro-

hibition officials at Washington in the voice said to be that of the general counsel for certain proprietary medicines (?) and by others in the same train of affairs, that the premedication of alcohol is altogether desirable. Why is it desirable?

We bear in mind that in seeking the criminal in a case of homicide, the law propounds the question: "Who profits by this man's death?"

Who profits by the premedication of alcohol? It is not the druggist, who having been trained in making his preparations by formula is not only forced to carry gallons upon gallons of various

medications (much of which must remain for months dead stock) but adds to his confusion and possible uncertainty in compounding.

It is not the doctor, living, perhaps, remote from urban conveniences and making many of his own tinctures and solutions.

It is not the government, who loses millions in revenue and who must also place skilled chemists in every distillery in the country that distributes premedicated alcohol—or leave the matter in the hands of the hired men of this institution to manipulate with what accuracy future vital statistics may be able to testify. At least there must be some method of control.

It is not the gullible and guzzling public, though it may be led to believe that "Mother Shallowitz' Purely Vegetable Compound" or "Old Captain Verboten's Strength-Giving Elixir of Plum Duff" may be bought for less money—because if this belief is entertained, we may all cheerfully subscribe to the time-worn but suspected belief that "Barnum was right."

The cause of prohibition will scarcely be affected with or without premedication. The analysis is then, that the government loses millions in revenue, plus the vast expense of trained experts in possibly separated areas, or face the unthinkable alternative of leaving the premedication to others; the doctor loses because he will scarcely dare trust the preparation or will care to carry so many medications.

The druggist loses because of his added care and additional stock which, possibly, he can ill afford to carry; or he may be able and willing to so select his premedicated stock that by chemical manipulation it will be possible to throw out the medicant and reclaim the alcohol—in which case the law has met defeat.

The only profit that can possibly accrue will therefore be to the commercial enterprises that have never been benefactors but will be further permitted to, like a parasite, thrive and fatten by reason of a vicious law.

If, however, the proposition should become a law and this law respected, it is entirely reasonable to conclude that our present books on pharmacy will either need to be rewritten, retaught and redigested or stand condemned as being only of historic interest.

THE RURAL MEDICAL PROBLEM.

Fortunately Rhode Island, because of its small size, is not so keenly interested in this problem as most of the other States, but in many it is a real problem and one that is still far from settlement. It is not apparently due to any shortage of physicians, because, in spite of the reduction in number of medical schools and in the advancing educational qualifications, the number of students studying in the medical schools shows a steady increase.

The principal reason for the problem is the present method of medical education. In the schools of today the students are taught to rely so much on the mechanical and laboratory aids in diagnosis and on the hospital for treatment. After serving an internship in a hospital where pathological, roentgenological, chemical and physiological laboratories play a necessary part in the routine examination of the patient, the conscientious medical practitioner will hesitate before settling in a community where such aids cannot be utilized.

The automobile and the good roads have made communication with the larger centers so easy that many physicians find that their patients are very apt to desert them for the city specialist or for the hospital that furnishes the necessary aids for diagnosis and treatment. The result of this is that either the medical man packs up his belongings to enter the larger field or else he sits back content to do the chore work in medicine, which brings in some return financially, but very little medical satisfaction.

One of the remedies suggested, the subsidization of the physician by the community, will never solve the problem. The average medical man prides himself on his freedom and to be forced to conduct himself against his better judgment would be most humiliating. Another remedy contains more promise and that is the establishment of county hospitals that may act as centers of medical knowledge, where the physician may find the scientific tools to which he has become accustomed and where the patient will receive the proper treatment.

THE BEST POLICY.

To tell the "truth, the whole truth, and nothing but the truth" when off the witness stand is not a policy that can invariably be followed by the prac-

tioner of medicine, an eminent colleague in a neighboring city to the contrary notwithstanding. Absolute truth-telling is, however, the ideal at which the practitioner should aim. If human nature were without frailties and human courage were perfect, plain truth would be the golden rule. But when courage is lacking and fear, the *bete noir* of the Eddyite, lurks in the wings, awaiting only as the cue the word of unvarnished truth ere it takes the very center of the stage—when, in other words, only ignorance of the truth prevents panic, let the doctor beware. Under such circumstances to blurt out the cruel facts is to commit a crime. It is atropine in glaucoma.

If, however, knowledge of the truth will not positively harm the patient, it is the duty of the doctor to the best of his ability to impart it. The day of mystery in medicine is over. We no longer look wise, prepare peculiar pills and potions, write mysterious, supposedly Latin words and queer symbols on prescription blanks, and satisfy the patient with long and quite unintelligible names when he asks us what his trouble really is, but we put the truth as we see it into simple language, not trying to conceal those aspects of the case which may be puzzling to us. Thus we gain his confidence and co-operation based on a reasonable conception of what we are about. It is by such straightforward dealing that public trust in the medical profession is fostered. It is true that very often the optimistic side of the truth must be stressed to bolster up courage that is wavering; also at times the warning note must be sharply sounded to curb the enthusiasm of him who would too freely risk his welfare. Nevertheless we deal strictly with demonstrable facts. Thus, gradually, the public is learning the basis, the extent and the limitations of the science and art of medicine. A general knowledge of these things will mark the end of charlatanism inside as well as outside the profession.

LETTER TO THE EDITOR.

"OLD TIMES."

Dear Editor:

Your "Lavender Corner" invites in a friendly way to sit by the pleasant fireside while reverly calls to memory reminiscences of other days.

On a Christmas of some years ago (1892), my friend of Shrewsbury, Mass., sent me a book en-

titled, "Old Times in Shrewsbury," giving a history of that town from early Colonial days, where he and his forbears practiced medicine for three generations. On the first leaf he had written.

"All things are baubles, beside
Old wood to burn,
Old wine to drink,
Old friends to talk with, and
Old books to read."

Having now passed my "three score years and ten," and "by reason of strength" entered that uncertain period of "four score," which the Good Book, continuing, adds "yet is their strength, labor and sorrow, for it is soon cut off and we fly away," I am now ready to admit what was not so apparent thirty years ago, when my friend made the statement that this life is a good deal of a bauble, and "we spend our years as a tale that is told." But now "Old wood to burn" at \$18 a cord is hard to get, the "Old wine" impossible, and our "Old friends," when we reach the "sere and yellow leaf," have long since ceased to talk with us, and are passed to their glorious reward; yet we still have left to us the good "Old books to read" and memories, fond and otherwise, of "Old Times."

When I came to this State, the examination of candidates for license to practice medicine in Rhode Island, and for membership in the Medical Society was held before a Board of Censors in old Franklin Hall, North Main Street. A member of this Board, Dr. Ely, asked me to read my Latin diploma (Harvard). I was then requested by another member to consider a case:

The patient came to the doctor's office that morning, from a neighboring city, a young woman, age 20, daughter of a clergyman, graduate of a college, unmarried, now teaching school; complained of a cough, but was more alarmed about the enlargement of her abdomen, which began about six months ago; was now increasing in weight, good appetite, but some nausea mornings, was constipated, and had not menstruated for some time, but this always had been quite irregular, and her physical development had been late in maturing. "What is the diagnosis?" Consumption, imperforate hymen, ascites, tumor, fibroid uterus, pregnancy, intestinal indigestion with flatulence, or phantom tumor? My answer did me no credit, and I am still uncertain of its intent and

the impression made on the examining Board. This case presented problems not lightly to be considered, nor likely to be solved by any snap judgment, on the other hand requiring careful investigation and a critical study of the history; the question given perhaps to test how far inexperience would commit itself, in other words, what medical students call a "catch question"; taking that view accounts for the following trifling reply, "Gentlemen, as her troubles began when tender buds swell in the spring, I should call it a case of misplaced confidence, and where the patient did not with prudence 'keep off the grass.'" My questioner deliberately shook his head, replying, "Young man, always give these patients the benefit of the doubt."

But bear in mind, kind friend, this happening occurred in "Old Times," before the building of the temple on the hill, before Mother Eddy wrote her book, while she was still a helper of Dr. Quimby in Portland. In this modern day some might give quite a different solution of this problem; just a "state of mind," let her forget it, banish these bad thoughts, or mayhap some naughty neighbor has with malicious or malignant thought assailed her; let these evil thoughts be cast out, as were the devils of old, to be followed with absent treatment, properly applied by those skilled in the "cult," at so much per.

But "to return to our mutton"; examination on diphtheria was taken up and I was asked, "When would you do tracheotomy?" My answer was "Never again." Within the month I had passed through the ordeal and met my Waterloo; at night cut a child's throat that was dying, and for the next four days and nights, spent most of the time at that bedside with a feather and by other means, endeavoring to keep the tube patulous, that air might reach the lungs, and finally brought to a close one of the horrors of my life, by signing the death certificate. (This, we are reminded, was before the days of antitoxin or intubation.) After the oral there followed a written examination, the conclusion to which proved satisfactory, as subsequently shown by reference to the old records, where we find the following entry:

"Sept. 18, 1884. The quarterly meeting of the R. I. Medical Society. President, Oliver C. Wiggin; Sec., George D. Hersey; Treas., Charles H. Leonard.

"The Board of Censors, Ariel Ballou, J. H. Eldredge, J. W. C. Ely, G. P. Baker, S. S. Keene, Benjamin Greene, E. T. Caswell, Eugene Kingman, recommended Dr. G. E. Buxton of Pawtucket and Dr. F. A. Payan of Olneyville, and these were elected Fellows of the R. I. Medical Society."

As we call to mind these familiar names, the duties and functions performed by these most worthy medical men, and when we are reminded that all those mentioned are dead with one gratifying exception, Dr. Leonard, are we not justified in the term used in our introduction, "Old Times"?

G. EDWARD BUXTON.

To the Editor:

The letter from F. T. R. published in the April issue of THE RHODE ISLAND MEDICAL JOURNAL is interesting and amusing insofar as it shows to what extent a man of reputed intelligence can distort facts and also because its contents could have been written before beginning the trip, given the prejudice he seems to have. But it appears more than prejudice to the writer; it is a regular obsession which disturbs his mind and produces even physical discomfort. No wonder that he has seen everything through a black cloud, has been annoyed by trifles, and has found fault with everything and everybody everywhere he has been in his rapid voyage. The first sign of derangement can be detected on board the S. S. Adriatic when he reflects deeply on human miseries and weakness and is assailed by pseudo-philosophical thoughts. These thoughts work him gradually up to a high pitch of mental excitement, becoming real torture when he arrives at Genoa. He cannot see the blue skies nor feel the effects of the balmy atmosphere of the Riviera, but has a terrible chill all over, becomes very gloomy and starts for the cemetery, from which he returns to resume his trip to Naples. Here he condemns the sky, the scenery, and, what is most incredible, the spaghetti, a fact which constitutes a true calamity to poor Italy. Of Pompeii, of Vesuvius, he says not a word! I can imagine with apprehension what will become of Rome, Florence, Bologna, Milan, Venice, Pisa, Turin, after he has visited them on his return from the land of Pharaohs.

It is evident that F. T. R. passed through Italy with his tourist guide-book under his arm, fully

convinced that with its aid it would be easy for him to pass judgment on such an insignificant country.

My best advice to F. T. R. is to study little history and remain at home. If he decides to cease wandering through the world he should ask frequent advice of his congenial lady acquaintance who, with the characteristic arrogance which comes from the lack of brain, heart, and serious education, said: "I would give more for my sitting room at home and a good fire than I would give for the whole of Italy."

Let us hope, however, that at the Nile, before the Pyramids, F. T. R. will receive worthy inspirations from a great Past, and return quickly to his normal condition.

Providence, R. I.

V. L. RAIA.

THE RHODE ISLAND MEDICAL JOURNAL does not concede itself a court of forensic or any other form of debate; this letter is published by special request.—Ed.

ANNOUNCEMENT

The Rhode Island Hospital, a charity, public in its service and usefulness but private in its support and management, has depended and must depend on the generosity of the public for the greater part of its maintenance. The cost of caring for the sick and injured has increased so much in recent years that the Board of Trustees has decided, beginning May 1, 1922, to increase the charge for caring for ward patients from \$2.50 per day to \$3.00 per day, even though this new rate does not cover the actual cost per diem, of \$3.72, during the last year. This cost does not include the services of the physicians and surgeons, who give their time and skill gratuitously to the care of ward patients. The Board of Trustees has also decided on the same date to increase the charge for caring for patients in semi-private rooms from \$3.50 per day to \$4.00 per day.

JOHN M. PETERS, M.D., *Superintendent.*

CASE REPORT

A RESUME OF AN UNUSUAL CASE OF CARCINOMA OF THE PANCREAS.

G. W. WELLS, M.D.

PROVIDENCE, R. I.

The case I am reporting tonight was admitted to the Rhode Island Hospital January 5, 1921, on the service of Dr. Frank T. Fulton.

Patient was a silversmith by trade, age 67 years, born in England.

CHIEF COMPLAINT—A constant, dull, gnawing, boring pain in the epigastrium of twelve weeks duration.

The pain grew progressively worse after onset, which was insidious. Pain did not radiate, was present continuously and was worse after meals. The patient belched gas occasionally, felt nauseated but never vomited. Was never jaundiced. Had been markedly constipated. He complained of thirst, had taken only liquid food for one week previous to admission because of discomfort in epigastrium caused by solid foods. Had lost about 20 pounds in weight, and felt very weak, which patient believed due to lack of food and sleep.

Urinary symptoms: Voided small amounts four or five times at night.

PAST HISTORY—Three years before admission became markedly constipated, lumbago one year ago. Lues and Neisser infections denied by name, sign and symptom.

FAMILY HISTORY—Unimportant as far as remembered.

PHYSICAL ON ADMISSION—Elderly, poorly nourished man lying quietly in bed. Looked acutely ill. Chest: Barrel shaped—ribs and sternum moved as one piece. Expansion equal and fairly good. Fremitus normal, percussion note dull and high pitched; breath sounds blowing and high pitched, occasional sonorous rale.

Heart: No precordial bulging. No visible or palpable apex beat, no thrills. Left border is within nipple line. Right border not defined. Rather marked arrhythmia, no pulse deficit at wrist. No murmurs. **Abdomen:** Scaphoid in appearance. No scars. Tenderness over epigastrium. Mass in epigastrium very slightly to left of mid line, size of large marble, rather firm and smooth and gives one an impression of pulsating synchronously with the cardiac systole. Dull to percussion, did not move on respiration. Palpation increased the pain in epigastrium but the mass was not tender.

His condition in hospital grew steadily worse, resulting in death 86 days after admission.

Twenty days before death examination of abdomen revealed another palpable mass slightly to right of mid line of epigastrium, firm, size of an egg, and also a larger mass smooth, less firm, size

of a large orange, movable on inspiration, over right kidney region. These masses seemed to be connected with the liver, and persisted with no change until death.

Three days before death his temperature, pulse and respiration rose and he showed typical signs of consolidation in right lung. The following work was carried out during the course of his stay in the hospital:

January 6, 1921: Negative K. L. Renal function 40% at end of two hours. Wassermann negative. Van Slyke, 66 vol. %. White blood count 9,500. X-Ray of gastro-intestinal tract negative.

Blood chemistry 50 mgm. urea per 100 c. c. blood; .07% sugar. Gastric analysis: Before and after test meal within normal limits. No lactic acid. No Boas-Oppler bacilli.

Urine: Specific gravity 10.11. Least possible trace of albumen. Few white blood cells. Few red blood cells. No casts.

Blood pressure 155/95. Weight 129 pounds. January 21. Hyper glycemia for sugar tolerance. Specimen I., 13% sugar; II., 18% sugar; III., 16% sugar. January 26. Provocative Salvarsan given. January 31. Wassermann negative. Blood sugar 14% sugar; 45 mgm. urea per 100 c. c. blood.

February 10. Spinal fluid examination showed 2 cells per cu. mm. Albumen very slight trace. Globulin negative. Wassermann negative. Colloidal gold 0012100000. Blood Wassermann negative.

March 21. W. B. C. 11,400, R. B. C. 3,840,000, Hgb. 65% color index 84. Urine examination showed occasionally slight traces of albumen and shortly after admission, sugar.

Twenty-five days after admission, patient showed sugar for five days, following which he showed sugar in urine only at intervals of five to seven days.

PATHOLOGICAL REPORT.

Body is that of an emaciated, old, tall, white man with marked pallor of skin. Fat and muscle tissue poorly developed.

Chest. Left pleural cavity free. Left lung well retracted. Right pleural cavity partly obliterated with loose recently formed adhesions. Right lung partially covered with fibro-purulent exudate.

Abdomen. No free fluid. Liver projects in mamillary line about one finger width below costal arch. Gall bladder markedly distended. Fibro-purulent exudate below the right diaphragm and in the adjoining parts of the peritoneum.

Heart shows a thickened mitral valve with no recent vegetations. Heart weighs 330 gms. Myocard. of rather dark color. Left heart somewhat dilated. Atheromatous changes in coronary artery and quite marked fibrous changes in myocard.

Left lung weighs 320 gms. Well aerated without macroscopically visible focal lesions. Right lung weighs 1,020 gms. It is heavy and shows an intense lobar infiltration of the upper and middle lobes corresponding to the stage of gray hepatization. A similar area of pneumonic infiltration appears in the lower lobe surrounding a hemorrhagic area which protrudes on the pleural surface of the base and is apparently an area of broken down tissue through which the infection of the right pleural cavity took place. In this region fibro-purulent flakes cover the costal and pleuric surfaces well extending downward into the costal phrenic sinus.

The abdominal cavity shows a tumor situated slightly to the left of the median line and three fingers width above the umbilicus. The stomach is dilated and its greater curvature reaches as far as three fingers below the umbilicus. The stomach, however, merely overlies the tumor and is not involved. The tumor mass is firm, of about the size of a peach and lies between the limbs of the duodenal loop, but does not penetrate into the intestine; neither is it found to be in relation with the abdominal aorta, which, however, shows marked atheromatous changes.

The pancreas head approaches the tumor mass and its tissue seems to be lost in it. Liver weighs 2,400 gms. It is enlarged and shows numerous smaller and larger metastatic nodules of grayish-white tissue. One particular solid and extensive mass of this tissue occupies the under surface of the liver about the region of the transverse fissure. Sections are taken from this part as well as from the tumor mass joining the pancreas head. Cross sections through liver tissue show numerous metastatic nodules of smaller and larger size throughout the substance of the liver. Gall bladder much distended and contains about 200 cc. of mucous, light colored fluid. Cystic duct obliterated.

Kidneys of about normal size. Capsule slightly adherent. No marked changes. Right kidney weighs 230 gms. Left kidney weighs 350 gms.

Pathological diagnosis: Carcinoma of either pancreas head (?) or of hepatic duct (?). Lobar pneumonia of upper and middle lobes of right lung. Fibro-purulent pleurisy. Subphrenic abscess.

SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION.

The regular monthly meeting of the Providence Medical Association was called to order by Vice-President W. B. Cutts at 8:50 P. M. on April 3, 1922. The records of the last meeting were read and approved. The Standing Committee having approved the following applications for membership, the Secretary was empowered to cast one ballot for the election of these men: Robert M. Lord, Albert C. Maynard, Malford Wilcox Thewlis, Yacomb T. Touzjian.

Dr. Philemon E. Truesdale of Fall River, Mass., read a paper on "Cancer of the Stomach." The tone of Dr. Truesdale's paper as a whole was rather despairing. This condition, more common than breast cancer, is at present impossible of diagnosis in incipency and only one in six of the cases found have a chance from treatment. It is a case of late warning, late recognition, and late treatment. He stressed the importance of closer co-operation between medical and surgical men as offering now the best chance of improvement in solving this problem. The paper was discussed by Drs. Matteson, Jones, Mowry, Gerber and Truesdale. Dr. Roy Blosser read a tense clear paper on "Diagnosis of Diseases of the Scalp." Meeting adjourned at 10:15 P. M. Attendance, fifty-eight members. Collation was served.

Monthly meeting held Monday, May 1, 1922, at Rhode Island Medical Society Library, Francis Street, at 8:30 p. m.

Program: Symposium on oral sepsis. Presentation from dental standpoint by Dr. C. A. Brackett, Professor of Oral Pathology, Dental Department, Harvard University; Dr. Percy R. Howe, Assistant Professor Dental Research, Harvard University. Discussion by Dr. A. M. Potter, Providence, R. I., and Dr. Mark Tishler, Providence, R. I.

The Standing Committee approved the application of Albert H. Jackvony, M.D.

Collation followed.

PETER PINEO CHASE, M.D.,

Secretary.

RHODE ISLAND MEDICO-LEGAL SOCIETY.

Regular quarterly meeting of the Rhode Island Medico-Legal Society was held at the Medical Library, April 27, 1922, at 5:15 P. M.

Meeting was called to order by the President, Roswell S. Wilcox, M.D. Minutes of preceding meeting were read and approved. Treasurer's report showing balance \$176.06 was read and ordered inserted in the records.

Resignation of Everard Appleton as member of this Society was read and on motion the same was accepted.

The President introduced Rev. John E. Blake, Chaplain of the State Institutions at Howard, who gave a most interesting address, subject, "A Leaf from a Chaplain's Notebook."

On motion, a rising vote of thanks was tendered the speaker. Adjourned at 6:15. Collation followed.

H. S. FLYNN, *Secretary*

RHODE ISLAND OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

The regular bi-monthly meeting of the Rhode Island Ophthalmological and Otolological Society was held in the Rhode Island Medical Library, April 13th, at 8:30 o'clock.

The program of the evening consisted of a presentation of a case of cyclitis, by Dr. V. Raia; case of exophoria, cured by operation, by Dr. Mesinger; paper on "Glaucoma," by Dr. McCabe, and a paper on "Nasal Sinusitis," by Dr. Abbott.

The meeting adjourned at 11 o'clock.

J. L. DOWLING, M.D., *Secretary*

WASHINGTON COUNTY MEDICAL SOCIETY.

Quarterly meeting of the Washington County Medical Society was held at the Elm Tree Inn, Westerly, Thursday, April 13, 1922.

After the transaction of routine business, Dr. Richardson of the Providence City Hospital addressed the meeting, taking for his subject, "The Schick Test and Immunity from Diphtheria."

Dinner at the Inn followed adjournment.

W. A. HILLARD, M.D.,

Secretary.

SECTION IN MEDICINE.

A regular meeting of the Section in Medicine was held in the Medical Library Tuesday, March 28th, 1922, at 8:45 P. M. Dr. Lloyd T. Brown of the Harvard Medical School gave one of the most interesting talks that has been heard before the Section in some time. Dr. Brown demonstrated many "Faulty Postures" with a large number of photos. The discussion of Dr. Brown's paper followed by Drs. Hammond, Mathews, Mowry, Gray, White and others.

A regular meeting of the Section in Medicine was held Tuesday evening, April 25th, 1922, at 8:30 o'clock at the Medical Library. Papers were presented from the R. I. Hospital by Drs. Chambers, Wells, Melvin and McCarthy. These very interesting papers were discussed by the Visiting Staff of the Hospital as follows: Drs. Sanborn, Mowry, Gerber, Burgess, C. O. Cooke, McDonald, Berry, Wescott, Turner and Gray.

CREIGHTON W. SKELTON, *Sec.*

HOSPITALS

NEWPORT HOSPITAL.

April meeting of the staff of Newport Hospital was an open meeting at which the following papers were read by members of the Medical Staff: Classification of "Diseases of the Heart," by Dr. E. V. Murphy; "Mitral Stenosis," by Dr. J. A. Young; "Syphilitic Aortitis," by Dr. N. M. MacLeod.

N. M. MACLEOD, *Secretary*

BOOK REVIEW

There comes to the reviewer's table a book, welcomed and esteemed, an old friend in a new and attractive edition, entitled, "The Celebrated Book on the Physician Himself," the Crowning Edition, by D. W. Cathell, M.D.

This might be called a great-little book, great for the many good things its pages contain, great for the helpfulness and pleasure it has already given in past editions, and no less valuable now to the medical man, who still must meet day by day the problems that beset the way; great for remarkable wisdom, for well seasoned advice, for hints, suggestions, comments and directions, that go far in helping the doctor on the road to success. A good little book, because it does not contain bulky pages so common to medical volumes, but of comfortable, easy handled size, a book not large, yet very satisfying, with every page crammed full of bright gems, that fairly sparkle and scintillate, abounding withal in that essential, common sense.

More than forty years ago we secured this book, one of the earlier editions (the first edition was sold out in a few weeks); our purchase was not an expensive one, but we valued it highly then and do so still; at that time we were making but few additions to our library; it still occupies a place in the reviewer's somewhat crowded collection of 1,500 volumes, many more pretentious in size and appearance, in expensive bindings of leather and gold, but few esteemed more highly for their intrinsic worth. It belonged to the limited bookshelves of early days, with no five-foot shelves by experts recommended, but among the few, occupied by school books and standard medical works, was one shelf apart, and grouped upon it by themselves, the Bible, Shakespeare, Pilgrims' Progress, Les Miserables, Autocrat of the Breakfast Table, Ik Marvel's Reveries of a Bachelor, The Luck of Roaring Camp, Innocence Abroad, and with this company was placed The Physician Himself, and this last named came to be one often consulted, valued most highly, and finally considered as guide, councillor and friend, for in this modest and unpretentious book was found answer and solution to the many annoying and perplexing questions that frequently arose.

G. E. B.

THE RHODE ISLAND MEDICAL JOURNAL

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ORIGINAL ARTICLES

CANCER OF THE STOMACH WITH REPORT OF END RESULTS IN SIXTY-FIVE CASES.*

BY P. E. TRUESDALE.
FALL RIVER, MASS.

Cancer of the stomach is generally recognized as one of the most despairing forms of neoplasm occurring in the human body. Unlike cancer elsewhere, such as in the breast, uterus, and rectum, it cannot be seen, nor can it always be felt upon examination. During the period when there is a chance for cure by extirpation, it is concealed and very often inoffensive. While cancer is far more common in the stomach than in the breast, we have removed cancer of the breast nearly twice as often. This means that, as a rule, patients will accept operation early if the facts are made clear to them.

The medical profession has been blamed for not discovering gastric cancer in its incipency. This is unjustifiable because it cannot be done at present in a large group of cases. We are approaching better results with more accurate means of diagnosis, and by giving the general public all facts they should know about cancer. But we have not arrived at a higher point of perfection in diagnosis than is shown in the production of one case of cancer of the stomach out of six examined which has any chance whatsoever for cure by surgical measures, and the mortality from any other form of treatment is 100%.

The difficulty in recognizing cancer of the stomach early has been expressed clearly by Graham, who said, "At present it must be admitted that the problem of diagnosis is quite insurmountable. The disease may be so insidious in onset, so lacking in urgent early symptoms that the patient is beyond help before pain or other danger signals have awakened him to his condition. He may present himself with such trifling trouble apparent that

even a careful clinician is not aroused to the gravity of the situation, and the patient is lightly dismissed only to await the fatal period. He has appeared at the clinic not from any grave fear, but rather because of loss of appetite for a few weeks, loss of flesh, strength and color, because he is unable to exert himself, or because some friend has urged him to undergo examination."

Billroth was the first surgeon to operate for cancer of the stomach. He did the first successful operation in 1881. His immediate mortality was 64%. In describing his operations, Billroth said, "The patients left the operating table in shock, from which some of them recovered." Naturally he was subjected to much criticism, but the mortality of medical treatment was, and is now, 100%. He cured a few, not many. Perhaps these were cancer, perhaps not.

Billroth said that his life was saddened by the number of patients with advanced malignancy who seemed to be attracted to his clinic. He was the only man of his period who gave them a chance based upon the principles which we are advocating today, two generations after his time.

The operative mortality at the Mayo clinic is about 7%, with about 22% living after five years. The general operative mortality in the larger hospitals is much higher, and the number of five-year cases is exceedingly small. These great differences may be explained in two ways. First. Any series of cases of gastric cancer operated upon by a large number of surgeons will invariably yield a high mortality rate. Second. The dividing line histologically between cancer and ulcer varies according to the concepts of the observer.

If the principles said to govern the origin, development, and treatment of cancer elsewhere in the body apply to cancer of the stomach, then I believe that surgeons who adopt radical measures in what appear to be borderline cases, will be rewarded by many five-year cures and some permanent cures. Radical excision of precancerous lesions, or potentially cancerous tissue, yields happy results while wide excision of a tumor, which to a bystander is obviously cancer, very rarely cures the disease.

*Read before the Providence Medical Association April 3d, 1922.

Making due allowance for the personal slant of the examiner as to operability of patients with cancer of the stomach, somewhat less than one-third are found to be reasonably hopeful risks for any operation planned to be helpful. In a series of 200 cases examined, we found 65 who presented enough on the bright side of the picture to warrant operation. Of this number, 30 were found to be inoperable when the abdomen was opened. Inoperability in this group was determined by extensiveness of the stomach involvement, and by the glandular, peritoneal, or visceral metastasis. Two died as a result of the interference.

Of the remaining 35, 18 were obviously incurable when the disease was exposed to view, but a palliative gastroenterostomy was done to offset existing obstruction. There were four deaths, $4\frac{1}{2}\%$.

The average length of life after this operation was eight months. The best one can report for these cases is that they improved for a few weeks or months, then remained unchanged for an equal length of time, and died from extension of the disease, not from starvation.

Partial gastrectomy was done in 17 cases. There was only one death from this type of radical operation. Mortality 6%. These were the most favorable cases for operation.

The majority showed a palpable tumor on examination. In many instances it could not be determined at the time of operation whether the tumor mass was benign or malignant. Only two are alive and apparently well, one eleven years after operation, and the other only nine months after operation. One lived seven years after operation, two lived more than three years, one lived two and one-half years, six lived between one year and a year and a half.

Two more cases should have been included in this series. In each the clinical diagnosis was ulcer, the operative diagnosis was ulcer, and the pathological diagnosis was ulcer. Yet both patients died of cancer in the upper abdomen. One lived more than three years and the other lived seven years. The remaining four could not be traced. So that it seems fair to report that of nineteen cases after radical operation the operative mortality was $5\frac{1}{2}\%$. Three lived more than five years, and six lived more than three years.

The radical operation is ambitious surgery. The choice of case for the operation governs the risk. The mortality can be made high easily, but if the end results are no better on the average than in this series of nineteen cases, I see no wisdom in operating on the more advanced cases.

The medical profession in general has not warmed up to the surgical treatment of cancer of the stomach, because, first, about 50% of the cases are found inoperable when the abdomen is opened.

Second. Operations upon the remaining 50% can be palliative in about half of this number.

Third. In the remaining 25% or thereabouts only is there a good chance to prolong life, and a fair chance of a five-year cure at least in a variable number, depending upon the type of tumor, the individual's defensive cells to cancer, and the character of the operation.

Although we are loath to do it, we must admit that this is a poor showing.

In the first group, as we find these patients, the operative mortality would be forbidding. The patients are usually poor surgical risks. Nothing worth while can be achieved by any known method of attack. Nevertheless, the true state of affairs could be determined only by laparotomy.

The second group calls for judgment in determining the case suitable for gastroenterostomy alone instead of partial gastrectomy.

The third group includes those obviously operable and demanding a higher grade of technical knowledge in order to expedite the operation without undue loss of blood.

All three groups fix upon us the importance of a single purpose, namely, to acquire a knowledge, a faculty, or some means to diagnose cancer of the stomach at its very beginning. A history of persistent indigestion with anemia and progressive loss of weight, in the absence of other lesions to explain the picture, in a patient over forty years old should excite suspicion, call for careful X-ray examination, and laparotomy if the symptoms cannot be explained otherwise.

William J. Mayo's comment, made in 1904, holds good today in spite of advances made since then in diagnostic methods. He said, "In an early exploratory incision we have the one diagnostic resource which is reliable and which must be resorted to in a large number of cases." A palpable tumor does not indicate an inoperable condition.

A movable tumor, especially if accompanied by obstruction, offers a favorable outlook.

Cancer at the cardia, at the fundus, and high on the lesser curvature, seldom gives rise to symptoms early enough to make it possible to relieve the patient by operation or any other known means.

On the other hand, the pylorus is the palpable portion of the stomach. Seventy-five per cent of gastric cancer occurs in this region. When the growth in its early stage is surrounded by a sufficient amount of inflammatory tissue to produce pain or impinge upon the lumen of the pylorus, there is a chance for surgery to accomplish as much here as in dealing with cancer of the breast or cancer of the colon.

To determine the presence of gastric cancer earlier we must make surgical examinations more often or rely upon the roentgenologist. In the X-ray department probably will be found the opportunity and the means to define the non-obstructing neoplasms at a period during their development, when there is a reasonable chance for cure by operation. Radium has no place in the treatment of cancer of the stomach, and the use of the X-ray for treatment is of very doubtful value.

What should constitute inoperability without actual surgical examination?

First. The anemic cachectic patient, with a palpable tumor to the left of the midline, obviously presents a hopeless picture.

Second. Secondary nodes above the clavicle, in the liver or in the pelvis contraindicate intervention.

Third. Free fluid in the peritoneal cavity is a sure sign of inoperability, since it indicates involvement of the liver or peritoneum.

Fourth. Induration at the umbilicus is indication of peritoneal involvement even in the absence of free fluid.

Finally, it must be clear to any thinking mind that the old way of approaching the stomach cancer problem will not get us anywhere. Where patients are treated in two camps, medical and surgical, the batting averages in end results are always low. The scent for cancer is not as keen when there is complete interdependence of the two main branches of practice. The very early cases of gastric cancer complain only of indigestion and

loss of weight. An internist *and* a surgeon should co-operate in the study of such cases. The patient should not be assigned medical or surgical until a careful preliminary study has been made. The machinery for transferring a patient is often clumsy and the patient gets lost between the lines. During the war the French used a large admitting tent which they call the Triage. Here the wounded were seen by several doctors with a view to sorting out the cases. I believe that in every clinic there should be a sorting station for borderline cases, so considered by the admitting physician. Interchange of opinion at this point between internist and surgeon gives each a chance to register an opinion or suggestion. Examinations may proceed and conferences be renewed always to the edification of the attendants and invariably helpful to the patient.

Thus far it is obvious that some method of examination, less radical than laparotomy, and as effective, must be evolved before *end result figures* improve much.

Failure to cure cancer of the stomach is due to late warnings, late recognition, and late operation, not to surgery.

DIAGNOSIS OF DISEASES OF THE SCALP.*

BY ROY BLOSSER, M.D.
PROVIDENCE, R. I.

Although diseases of the hair and scalp are relatively common, the medical profession as a whole has given little attention to this subject. As a consequence, patients who suffer from these diseases usually drift around from one to another of the self-constituted hair specialists, beauty parlors, barber shops, and what not. It is now believed that many of the diseases of the hair and scalp are infectious. Owing to the fact that these so-called specialists have usually little idea of the importance of observing a proper technique in the handling of such cases, it is natural to conclude that they are often responsible for the spread of contagion.

Among the diseases of the scalp which most frequently lead the patient to seek medical or other aid are those causing loss of hair. This class of cases may be divided into those in which the hair

*Read before the Providence Medical Society April 3, 1922.

loss is circumscribed to one or more areas, and those in which it affects the entire scalp.

Circumscribed Loss of Hair. The most common disease causing circumscribed loss of hair is alopecia areata. This condition comes on rapidly, with complete loss of hair in areas ranging in size from a quarter of a dollar to a dollar or larger. The scalp is perfectly smooth and the surrounding hair appears normal except that on close examination a few short stumps of hair may be detected around the margin of the patch which, from their peculiar shape, are called "point of exclamation hairs." In rare cases the hair is entirely lost; such cases are called alopecia totalis.

Another disease causing loss of hair in circumscribed areas but differing in other respects from alopecia areata is ringworm of the scalp. This disease occurs in children between the ages of five and fifteen. It is extremely rare in adults. The loss of hair is irregular, and lacks the clean cut appearance seen in alopecia areata, and the denuded areas are covered with grayish scales. On close examination many broken off and twisted hairs are seen in the partially bald areas. Another, and less common variety of the disease, known as "black dot" ringworm, bears some general resemblance to alopecia areata. In this form of ringworm the hairs are broken off so close to the scalp that they resemble black dots.

In all cases of ringworm of the scalp the diagnosis can be confirmed by extracting some of the broken hairs and examining them under the microscope.

A suppurative condition known as kerion occurs as a complication of ringworm and consists of boggy swellings of variable size from which ooze sero-pus. There is no pocketing of the pus and hence nothing is to be gained by incising them.

A disease prevalent in some European countries but rarely seen in America except in immigrants is favus. The most common location of the diseases is the scalp, but it may also occur on other parts of the body. The typical lesion of favus is a small yellow crust with a central cup or depression. The fungus which causes the disease can be demonstrated microscopically.

Lupus erythematosus sometimes involves the scalp, being secondary to lesions on the face or other parts of the body. Occasionally it occurs on

the scalp alone and in this location the characteristic features of the disease as seen on the face are lacking. There are one or more variously sized bald areas which are at first pink in color and slightly scaly, but later become pale and atrophic with a peculiar cribriform appearance due to the patent orifices of the hair follicles. Itching is usually a pronounced symptom.

Folliculitis decalvans is a form of alopecia in which the hair follicles are destroyed in numerous small atrophic patches which partially coalesce to form large irregular areas of baldness. It is a slowly progressive disease and causes permanent destruction of the hair follicles.

Other causes which produce circumscribed loss of hair are wounds and burns of the scalp, and syphilitic lesions of an ulcerative type which sometimes occur in the tertiary stage of the disease.

GENERALIZED LOSS OF HAIR

Among the diseases which result in a generalized loss of hair, premature hereditary alopecia is of rather frequent occurrence in males. The hair begins to fall out soon after the age of twenty. This may take place rapidly or it may be more gradual and occupy several years. In some cases the scalp appears to be perfectly healthy. In others, the condition may be aggravated and the loss of hair made more rapid by some form of disease of the scalp.

The hair loss accompanying various systemic diseases is known as alopecia symptomatica. There may be only thinning of the hair, or there may be complete baldness, but it is usually only a temporary condition and the hair grows in again when health is restored. This form of alopecia is a common occurrence following the exanthemata, especially measles and scarlet fever; many cases have occurred as a result of the influenza epidemics in recent years.

The alopecia of syphilis is well known. It is usually noted as a thinning of the hair occurring in the early part of the secondary stage. It also occurs in the form of ill-defined patches which give the scalp a "moth-eaten" or "mangy" appearance, but such cases are exceptional and usually occur later in the course of the disease.

The most frequent disease of the scalp causing general hair loss is some form of seborrhoeic alopecia. The term seborrhoeic was applied because

formerly it was thought that these diseases were due to an excessive flow of oil from the sebaceous glands. But it is now generally believed that they are microbic in origin and while they do occur as a rule in persons with greasy skins the greasiness merely acts as a predisposing factor by rendering the soil more fertile for the growth of bacteria.

A mild type of the disease is known as pityriasis capitis. There is more or less scaliness or dandruff, the hair is usually dry and lusterless and the scalp is itchy. The itching is relieved temporarily by shampooing but soon recurs. In some cases there is no loss of hair; in others it is noted that the hair comes out too freely from brushing. Baldness does not usually begin until the age of thirty-five or forty and is first noted at the vertex of the head or at the sides of the forehead.

A more serious form of the disease accompanied by an intractable type of baldness is known as pityriasis oleosa. There is pronounced oiliness of the scalp. In some cases the oil becomes waxy so that the scales adhere to the scalp. As Sabouraud remarks, "they fall no more but then it is the hairs which fall." It occurs most frequently in males but females are not exempt. In the latter it causes marked thinning of the hair but rarely absolute baldness. The disease usually begins soon after puberty but it occasionally occurs in young children in whom it persists throughout life.

The term seborrhoeic dermatitis has in the past been more or less loosely applied to the various seborrhoeic diseases of the scalp. Following Sabouraud's classification it is now usually limited to those cases in which there are definitely inflamed and reddened patches, covered with waxy scales or crusts, such areas not infrequently extending beyond the hair margin.

DISEASES UNACCOMPANIED BY LOSS OF HAIR

Among the diseases not attended with hair loss, pediculosis capitis and the secondary infections which follow it are extremely common in children. They make up a large percentage of the skin cases seen in the out-patient departments of our hospitals. But pediculosis is by no means limited to poor children. It occurs not infrequently among children of the well-to-do. In advanced cases the scalp becomes inflamed and excoriated and may be crusted from a secondary impetigo. The latter infection may be transferred to the face or other

parts of the body. In such cases, if an examination of the scalp is neglected, the real cause of the trouble, pediculosis capitis, is not found.

Psoriasis of the scalp is easily diagnosed by the characteristic lesions occurring elsewhere on the body.

Among the skin lesions now known as neurodermatitis, first described by the French dermatologist Brocq, a fairly common and characteristic location is the lower part of the scalp near the nape of the neck. In this location the lesions differ somewhat from those seen elsewhere on the body, being scaly, red or pink in color and fairly sharply defined. This condition is accompanied by severe pruritus.

The disease known as sycosis barbae, a staphylococcal perifolliculitis, usually occurring on the bearded region in men, may also involve the scalp.

REMARKS OF ACCEPTANCE TO THE PRESIDENCY OF THE RHODE ISLAND MEDICAL SOCIETY

By

DR. FRANK E. PECKHAM.

Members of the Rhode Island Medical Society:

When a body of men like this society offers the highest office at its disposal, it makes one feel very humble indeed. I appreciate deeply the honor conferred and feel strongly the duties which it also imposes.

To me the profession of medicine is a big challenge, composed of very many smaller or sub-challenges. The men making up this grand profession are men of varying ability. As each man develops his peculiar bent, he naturally fits in somewhere, because there are so many avenues in which he can accept the challenge which most appeals to his personal characteristics.

It has been said that men are individually less than 50% efficient in their effort and when a number of men are banded together in any effort the percentage of efficiency of the body politic is probably less than any individual.

During the coming year, with only a few meetings at my disposal, I shall try to have papers illustrating if possible some of these challenges so that we may become more cognizant of some of our deficiencies and in this way apply a stimulus to our energies both individually and collectively.

I sincerely thank you for the honor conferred upon me.

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EDITORIALS

THE JANE FRANCES BROWN BUILDING.

With the recent opening of the Jane Frances Brown Building, the Rhode Island Hospital has been placed among the first in the eastern States, and, indeed, in the country, in the way of modern hospital facilities.

This building and its appointments is a commentary to the painstaking care and investigation attendant to its completion, and demonstrates that the actual structural work was not the great-

est effort that the authorities having to do with its erection and equipment put forth, but better represents the end results of a great deal of preliminary investigations and forethought.

It might be thought, at first glance, that the schedule of fees, which may be found upon another page of the JOURNAL, is somewhat in excess of general expectancy. It has developed, however, that there are many who are not only able but entirely willing to pay for the skilled and exacting care and treatment made imperative by institutional training, especially when

coupled with elegant, not to say luxurious, accommodations and environment.

It will be noted also that the obstetrical ward, an entirely new departure of the Hospital, lends added attractiveness to the general hospital facilities.

ON MEDICAL EXPERT TESTIMONY.

At the last meeting of the American Medical Association the Chairman of the Section on Nervous and Mental Diseases expressed himself in no uncertain terms concerning the present status of medical expert testimony. He said that the usual practice of each side selecting experts who appear in court with a partisan label has led to many ills, not the least of which is the resulting public distrust of our opinions. And he went on to remark further that while psychiatrists share this burden with all medical and professional men such as chemists and engineers, they suffer relatively more damage to their reputations because cases involving questions of mental responsibility are prone to attract a great deal of popular interest and to be exploited by the sensational press. Under these circumstances, even the most friendly and discriminating lay people are tempted to question not the exactness of the physician's knowledge only, but also his common sense and perhaps at times even his sincerity. If medical men do not always appear sensible and trustworthy when under oath, how can they expect the public to trust them as advisers in their serious and intimate personal problems?

These are hard sayings and coming as they do from such a source, they merit our serious consideration. No one who is not hugging illusions can deny that, taking it on the whole, medical expert testimony is in ill repute. But to lay the whole blame for this state of affairs upon the physicians, as is frequently done, is to further neither justice nor the truth. Physicians, like other men, have to take things as they find them, and things as they find them at present with respect of expert testimony are not to the physicians' liking. Men who have the honor and the good repute of their profession at heart are concerned solely with helping courts and juries to arrive at the truth, to the end that justice may obtain between contending parties; but under the existing

system such a result is, we do not say impossible, but certainly hard to attain.

To begin by calling us "physicians for the plaintiff" or "physicians for the defendant" is wrong in principle, and therefore bad in practice. It introduces an atmosphere of contentiousness, a spirit of partisanship, into an inquiry which ought to be a disinterested search for facts and an attempt at their right adjudication. There should be no display of rhetoric and no indulgence in verbal sophistries which cloud the mind and darken the counsel of judge and jury. But as things are now, the medical expert is placed in a false and to him most disagreeable position; for he seems to be, and indeed as examinations and cross-examinations are conducted, he is the advocate of *ex parte* opinions. Instead of being free to state his convictions, his doubts, his hesitations and ignorances as they issue from the alembic of his own mind, he is constrained to express himself in the way prescribed for him by legal formalism and the dialectics of the law schools. A partisan witness, in appearance if not in reality, he speaks with diminished authority to his fellows. For others outside his own ranks to tell him that he fails many times to convince is to supply him with quite superfluous information.

What, then, are we to do about it? Well, for one thing, we can publicly express our dislike of the present situation; more than that, it is difficult to say what we can do. So many factors enter into the problem that it is beset with thorns on every side, but this much is certain, that one of our problems for the future is—if we are to save and augment our self-respect—to make medical knowledge available for courts and juries in such fashion that physicians shall be not even in appearance, partisans of this side or of that, but protagonists of what they believe to be nearest to the truth.

HOSPITAL CLINICS.

The education of a physician does not end when he graduates from Medical School. In fact, it has only just begun. Nothing is sadder than to come into contact with men who have been in practice many years and who are still thinking in the terms of methods learned during their medical school course. Not only have they not pro-

gressed, but actually have forgotten much of what they were taught. Many physicians make some effort to inform themselves of what is going on in the medical world. They read medical magazines but because of lack of funds or inability to leave their practices, cannot attend conventions and clinics in medical centres. The income of the average physician is not large and when he lives in towns or cities remote from medical centres it is obvious that the privileges of continuing medical education are beyond his reach. Someday perhaps, educational facilities will be taken to him by the establishment of community hospitals to which will be sent competent clinicians who are able to teach; for medical teaching need not be confined to a few centres.

In Rhode Island, physicians are more fortunate than they are in other parts of the country, for we are near Boston and New York. Yet the opportunities of the clinics in these cities are not made use of as they should be. This applies not only to those who have no hospital connections, but to those who do have.

A logical and feasible scheme is to establish a definite set of clinics covering medicine, surgery and the specialties, to be held in the several hospitals of the State. The State is small and a doctor could attend forenoon clinic and return to his home in time for afternoon office hours. The expense would be trifling, and the doctor would not have to neglect his practice.

It would be stimulus to the hospital and the visiting staff to do better work if they are obliged to present before groups of physicians, patients for diagnosis and treatment. It would help the general practitioner to better evaluate new procedures and methods, clinical, laboratory, and surgical. Many new procedures must be discarded for every one which is found of real service.

There are several hospitals in the State which have a great deal of material and good facilities for teaching, and physicians and surgeons on their staffs who are capable of teaching if courses were arranged.

The object of this article is to urge the State Medical Society to choose a committee which should be given authority to approach the management of the hospitals which are, in their opinion, able to attract physicians to clinics, and arrange a series of clinics at each hospital. Each

hospital staff could decide who would hold the clinics for doubtless some might not care to do it. The program for a year's work should be arranged and printed in as much detail as possible, certainly the time and the place of the clinics and the names of the physicians who are to conduct them. The exact diseases or operations to be presented might have to be announced to physicians of the State just preceding the clinics, for hospitals would not know long before hand what material would be available at the date of the clinic.

It is well to warn that not every clinic will have a large attendance. Much will depend upon the subject to be presented and the man who is to present it. But if only one physician attends, the clinic would justify itself. In fact, inoperative clinics and medical clinics held at the bedside, should always be small, for each physician attending would feel free to ask questions and discuss the subject in hand. It must be realized that the man who holds the clinic receives quite as much good from it as the physician attending. In this manner the hospitals of the State would be urged to better work and serve as educational centres which they will generally someday. Physicians generally would be benefited and do better medical work and the public thereby receive the benefit of improved service.

SPRING VACATIONS FOR PHYSICIANS.

Most physicians, we believe, are in the habit of taking their annual vacations during the summer or early autumn. Some take both a spring and autumn vacation and a few take none. These latter usually regret it sooner or later when their own health breaks down and they find that their patients can get along perfectly well without them for a brief period. It is surprising that more physicians do not take advantage of the medical meetings which occur every spring, to combine a pleasant week's trip with a profitable course of instruction. At the recent meeting of the American Congress of Physicians and Surgeons in Washington, but a small portion of Rhode Island physicians was present, although any physician in good standing and interested in the work of the special societies was perfectly welcome to attend. A meeting of the New England Section of the

American College of Surgeons was held in Portland a few weeks ago, but the attendance from Rhode Island was painfully small. Another spring meeting which should attract the profession at large is the American Medical Association in St. Louis and yet very few members attended, largely because of the distance. We Easterners are not good travelers, a fact which has been many times commented upon by the residents of the West. The physician would be greatly refreshed by a trip at this time of the year, and if his journey included a few days at one of these medical meetings, his patients would benefit from the inspiration of such a happy combination of travel and post-graduate study.

CASE REPORT

TWO SEVERE CASES OF PERNICIOUS ANEMIA TREATED BY TRANSFUSIONS.

HENRY McCUSKER, M.D.

By permission of Dr. C. S. Westcott, I am presenting tonight two cases of pernicious anemia which were on the first medical service at the Rhode Island Hospital recently. Both cases were treated by a series of transfusions and their progress is interesting.

The first case is that of E. G., a young woman of 30, single, and white. Admitted Feb. 12, 1922, complaining of general weakness.

Her past history is negative for disease except that she had measles when a child. She came to this country from Ireland 9½ months ago in excellent health. About two months ago she had attacks of vomiting every few days before and after meals but especially before breakfast. Her vomitus was white, sour and with no particles of food or blood showing. She also complained of night sweats and slight palpitation. Her skin became very pallid. Appetite fair. No anaesthesias or paraesthesias.

Physical examination showed a young woman whose skin was of pale yellowish tint and who was apparently in much weakened condition. There was evidence of considerable loss of weight.

Head: Examination showed no gross abnormalities. Pupils equal, regular and react to light and accommodation. Ophthalmological examination showed both nerve heads pale and outlines not

sharply defined, also several small recent hemorrhages. Mouth negative. Tongue somewhat swollen and reddened—not painful. Chest: Examination was negative. No rales and no signs of consolidation. Heart sounds rapid and not forcible. No murmurs made out. Blood pressure 110/55.

Abdomen: Soft. Liver edge felt just below the costal border. Spleen not enlarged. Extremities: Show moderate degree of emaciation. No disturbance in reflexes and no abnormal reflexes. No areas of anaesthesia made out on rough testing. On admission the temperature was 101°. Pulse 100. Examination of stools showed no occult blood and no eggs. The blood picture on admission was as follows: R. B. C. 800,000. W. B. C. 2,200. Hgb. 30%. Smear showed marked anisocytosis, poikilocytosis, slight polychromatophilia, a rare megaloblast and normoblast; Polys 66%, Small lymphocytes 27%, Large lymphocytes 4%, Eosinophiles 3%.

The patient's blood was typed and found to be type II, while two of her sisters also showed type II, and a third sister type IV. All had negative Wassermanns. On the third day after admission the first transfusion was done on this patient and 400 c. c. citrated blood injected with no ill after-effects. On the next day, however, the patient began to cough, felt feverish, and then went through a fairly definite attack of broncho-pneumonia with temperature at times of 104° and pulse around 130 and 140. The R. B. C. was now 968,000 and Hgb. 30%. It was not until 18 days after the initial transfusion that the patient's condition warranted the second. Four hundred c. c. citrated blood was then given and the patient suffered no reaction. The R. C. went up to 1,296,000 with Hgb. remaining at 30%. After twelve days, the third transfusion was done and again 400 c. c. citrated blood given without a transfusion reaction. The R. B. C. in a few days was 1,656,000 and Hgb. 40%.

The patient's general condition showed marked improvement with steady gain in strength, general tone, color and appetite. Patient was now allowed out in the sun parlor in a wheel chair.

The fourth transfusion followed in 13 days and again 400 c. c. of citrated blood from a sister donor was given to the patient, who complained only of tenderness at site of the needle puncture.

The fifth and final transfusion was performed after 13 days and 350 c. c. citrated blood was given to the patient with no after effects.

Before discharge from the hospital on April 18, 1922, the R. B. C. was 1,496,000, a slight decrease over previous count. The Hgb. was 60%. There was no marked achromia, a very slight anisocytosis and poikilocytosis. No nucleated reds and a slight increase in eosinophiles.

CONCLUSION: This case shows a tremendous improvement in general condition and blood picture of a patient in a declining stage of pernicious anemia. It will be noted that this patient had an infection, to wit, a broncho-pneumonia, in her pernicious anemia course. I understand that an infectious disease in a patient with pernicious anemia is a rare condition.

The second case is that of C. H. M., 32 years of age, male, single, white, admitted on Jan. 25, 1922, with a diagnosis of pernicious anemia. On admission the patient was in a desperate physical condition.

Past History: He had ordinary children's diseases. Patient was one of 18 children, five of whom are living (besides the patient). Causes of death are not known but all died in infancy. In 1918, a local M.D. told him that he had pleurisy. He was drafted and served about a year in the American forces. Was discharged physically sound with a gain of weight of about 20 pounds.

Present Illness: Began six months ago when he consulted a doctor for fatigue and weakness and dyspnoea on exertion. After four weeks of treatment he felt as well as ever. At the same time he also took five bottles of a well-advertised patent medicine and felt so much better that he agreed to allow the use of his name as an advertisement for the medicine. About four months ago, his friends noticed that his skin was becoming yellow, but he noticed nothing unusual except that he was becoming more easily fatigued and dyspnoeic. One month ago he consulted another doctor, complaining of increasing weakness, extreme fatigue, dyspnoea on exertion and paraesthesias of extremities. These symptoms continued and he was sent to the hospital for further treatment.

Physical Examination: On admission he showed loss of about 16 pounds in a year. Skin was of lemon color. Head: Following abnormalities noted: There were many recent hemorrhages, and pigment changes resulting from old hemorrhages

in each retina. Tonsils were buried. Throat granular. Mouth and tongue were not sore. No definite pathology of neck.

Chest: Well developed and expansion good. No evidence of pulmonary disease. **Heart:** Apex in 4th space to left of sternum in nipple line. Sounds regular and of good quality. Slight soft systolic murmur, heard over entire precordium, more marked over pulmonic area. Pulmonic second greater than Aortic second. Blood pressure 105/45.

Abdomen: Liver not enlarged. Spleen edges not felt. Abdominal wall flaccid. No masses or tenderness made out. No evidences of ptosis. **Extremities:** Well formed. Deeped reflexes were active but not exaggerated. Abdominal reflexes present. No anaesthesias and no paralyses. No dysmetria. From time of admission until fifth day there was temperature from 100° to 102°. Pulse was about 100. In stools no blood and no eggs were found. The blood picture was as follows: R. B. C. 800,000. W. B. C. 2,800. Differential stain showed marked poikilocytosis and anisocytosis with some polychromatophilia. A few megaloblasts were seen. Hgb. 20%. Blood was type IV. Wassermann negative. On the fifth day after his admission a transfusion was advised and his condition was considered so desperate that the transfusion was done on the ward without moving the patient from his bed to the operating room. From a selected donor I withdrew 350 c. c. blood, mixed it with 35 c. c. citrate and injected it into patient. He had no bad after-effects and slept well that night. On the next day his temperature, which had been 102° several days before the transfusion, dropped to 100° and then 99° and there was a drop in pulse. R. B. C. went to 1,688,000. Hgb. 30%.

Five days later a second transfusion was done (this time 500 c. c. of citrated blood). There were no chills or other reactions. Three days afterwards the R. B. C. was 1,456,000, a slight decrease. Eight days after previous transfusion, a third was done, and 400 c. c. citrated blood given. R. B. C. two days later was 2,200,000. Hgb. 40%. The fourth transfusion followed ten days later and 500 c. c. citrated blood was given to the patient with no reaction of any sort. The next R. B. C. was 2,424,000 and Hgb. 60%. His physical improvement continued.

After eleven days the fifth transfusion of citrat-

ed blood (500 c. c.) was performed, and the R. B. C. a week after the transfusion was 3,064,000. Hgb. 70%. The sixth and last transfusion followed the fifth by 20 days. After 250 c. c. of citrated blood had been introduced the patient complained of sharp, cramp-like pain in the abdomen and the operation was stopped. The reaction was momentary, however, and the patient felt perfectly well in a few minutes. The next morning he was up and about the ward as usual. After the third transfusion his condition improved markedly—his dyspnoea decreased and his color improved. In six weeks he had six transfusions and after every transfusion his Hgb. arose and his blood picture greatly improved. After the sixth week he was able to be up and around the ward and there was no dyspnoea and no weakness. The color returned to his cheeks and hands. His blood picture on discharge (April 1, 1922) showed R. B. C. 3,660,000, Hgb. 75%. No nucleated reds, no achromia, slight polychromatophilia and marked anisocytosis and poikilocytosis. Conclusion: This case also shows the advantages of transfusion in case of pernicious anaemia of severe degree. There were no difficulties encountered in obtaining the blood or in injecting it. There were no transfusion reactions. This case also shows the advantages of the medical man doing the transfusions for he can watch his patient and do the work without causing difficulties in transferring patient from one service to another and without increasing the anxiety of the patient.

Both of these patients have been out of the hospital a very short time and no follow-up work has yet been done on them, but it is our desire to keep them under observation for a long time in order to determine the permanency of their relief.

ANNOUNCEMENT

THE JANE FRANCES BROWN BUILDING FOR PRIVATE PATIENTS—RHODE ISLAND HOSPITAL.

A separate entrance for this building is at 44 Lockwood Street.

Direct telephone service is through the Rhode Island Hospital.

BILLS—Bills are payable weekly, in advance. Patients should come prepared to make a payment sufficient to cover the expenses of the first week. Any excess payment will be refunded.

RATES—The rates for private rooms range from \$7.00 to \$11.00 per day, according to the size and location. Those at \$7.00 per day are for patients occupying beds in two-bedded rooms. The charges include board, ordinary medicines, the divided attention of the regular nurses on duty, which is all that is required, unless the patients are very ill.

OPERATING—A charge of \$15.00 is made for the use of an operating room or a delivery room, and includes dressings and ordinary drugs.

EXTRAS—A charge of \$5.00 will be made for Laboratory work ordered by the physician in charge of the patient. Special charges will be made for unusual Laboratory work as per schedule of prices.

An additional charge is made for X-ray examinations or treatments (in proportion to the amount of work done), for massage, for rare and expensive drugs and for wines, mineral waters, etc.

NURSING—The regular nursing force is quite sufficient for the necessary care of a patient, unless the patient is very ill.

A charge for the exclusive services of a graduate nurse is \$6.50 per day, which includes the charge, \$1.50, made for the maintenance of the nurse at the Hospital.

Persons entering the Hospital as hospital cases, that is, not as the private patients of any particular member of the Staff, will be expected to pay fees for professional services in addition to the charges made by the Hospital for board and room of patients.

If the services of a specialist or consultant are needed, it is expected that such specialists and such consultants will render separate bills for their services.

VISITING HOURS—Patients may be visited daily (subject to the order of the doctor in attendance) from 9 A. M. to 9 P. M. The visiting is limited strictly to these hours, and the friends and relatives are expected to accommodate themselves, as exceptions will be made only in case the patient is critically ill.

Relatives of patients are not permitted to remain over night with patients except in cases of critical illness, when permission is granted by the Superintendent.

Relatives or friends are not permitted to occupy

a room with a patient except in the case of parent and child, when \$5.00 daily will be added to the price of the room, which charge will include meals for the parent.

In the event of critical illness, rooms may be engaged by friends at the regular rates. The Hospital reserves the right to withdraw this service upon due notice if the room occupied by friends is needed for a patient.

TELEPHONES—There are telephone connections in all bed-rooms. Instruments may be installed at the patient's expense, with the permission of the attending physician or surgeon.

VALUABLES—Valuables should be deposited with the cashier, to be placed in the Hospital safe. The Hospital will not be responsible for money or valuables unless deposited in this manner.

LAUNDRY—The Hospital will not care for personal laundry.

GRATUITY—No person employed in or connected with the Hospital is permitted to receive gratuities from the patients or from friends of patients. All are requested to respect this custom, as failure to do so will render the employee liable to immediate dismissal.

OPERATIONS—Operations will not be performed on Sundays or holidays except in emergencies.

Checks should be made payable to the Jane Brown Memorial, and all business details should be arranged with the Nurse Director in charge of the Jane Frances Brown Building for Private Patients.

CRITICISMS—It is requested that any complaints, criticisms, or suggestions for improvement of service be made at the office before leaving the Hospital.

JOHN M. PETERS, M.D.,
Director.

SOCIETY MEETINGS

RHODE ISLAND MEDICAL SOCIETY.

BUSINESS TRANSACTED BY THE HOUSE OF
DELEGATES.

May 19th, 1922.

The regular meeting of the House of Delegates was held this day at 5:15 P. M. in the Medical Li-

brary. The reading of the minutes of the previous meeting were omitted by unanimous vote, as these had been published in the transactions of the Society in the R. I. MEDICAL JOURNAL. The meeting proceeded to the election of officers with the following results:

President—Dr. Frank E. Peckham.

First Vice-President—Dr. Arthur T. Jones.

Second Vice-President—Dr. Wm. F. Barry, Woonsocket.

Treasurer—Dr. W. A. Risk.

Acting Treasurer—Dr. J. W. Leech.

Secretary—Dr. J. W. Leech.

Committee on Arrangements—Dr. Paul Appleton, Alex. M. Burgess, Charles F. Gormley, Treasurer.

Committee on Legislation, State and National—Drs. Frank T. Fulton, Herbert E. Harris, Henry L. Johnson, President and Secretary, ex-officio.

Committee on Library—Dr. Herbert G. Partidge, John E. Donley, Roland Hammond.

Committee on Publication—Dr. Frederick N. Brown, B. H. Buxton, P. H. Manning, Wickford, President and Secretary, ex-officio.

Committee on Education, State and National—Dr. Charles O. Cooke, John G. Walsh, Lucius C. Kingman, President and Secretary, ex-officio.

Curator—Dr. Carl D. Sawyer.

Committee on Necrology—Dr. Charles L. Phillips, John F. Kenney, Milton H. Duckworth, Carolina.

Auditor for Two Years—Dr. Frank M. Adams.

The Secretary then reported the recommendations of the Council and it was voted to approve the recommendations in re: 1. Committee to purchase stereopticon. 2. Liability insurance on Medical Library Building. 3. Salary of Librarian. 4. Salary of Janitor. 5. Repairs to Medical Library Building. The Acting Treasurer presented the Treasurer's report for the fiscal year 1921-1922, which showed expenditures of \$5,642.13, receipts \$7,276.25, leaving on hand a balance of \$1,634.12.

TREASURER'S REPORT.

1922		1921	
Jan. 1	Chase Wiggin Fund	Jan. 1	Chase Wiggin Fund
	To Loan R. I. Medical Society . . .		By Indebtedness to R. I. Medical Soc. \$6,892 21
			\$6,892 21
	\$6,892 21		\$6,892 21
1922		1921	
Jan. 1	H. G. Miller Fund	Jan. 1	H. G. Miller Fund
	To Loan R. I. Medical Society . . .		By Indebtedness to R. I. Medical Soc. \$5,359 10
	Rent H. G. Miller Room		Interest 250 00
			\$5,609 10
	\$5,609 10		\$5,609 10
1922		1921	
Jan. 1	J. W. C. Ely Fund	Jan. 1	J. W. C. Ely Fund
	1 Bond, So. California Edison Co. .		1 Bond So. California Edison Co. . \$980 00
	8 Shares Mechanics Nat. Bank Stock		Interest on same 50 00
	Paid R. I. Med. Soc. (for Journals)		8 Shares Mechanics Nat. Bank Stock 480 00
			Interest on same 24 00
			\$1,534 00
	\$1,534 00		\$1,534 00
1922		1921	
Jan. 1	Endowment Fund	Jan. 1	Endowment Fund
	Cash on Hand		Cash on Hand \$2,082 74
	Liberty Bonds 3½%		Donations 115 19
			Liberty Bonds 3½% 350 00
			Interest 85 45
	\$2,633 38		\$2,633 38
1922		1921	
Jan. 1	Printing Fund	Jan. 1	Printing Fund
	To Loan R. I. Medical Society . . .		By Indebtedness to R. I. Medical Soc. \$1,677 52
			\$1,677 52
1922		1921	
Jan. 1	Sinking Fund	Jan. 1	Sinking Fund
	Cash on Hand		Cash on Hand \$1,531 52
	Total Receipts		Received from R. I. Medical Society 1,427 67
			Received from E. M. Harris Fund . 575 19
			Interest 65 62
			\$3,600 00
	By Cash paid for cancellation of Bonds		\$3,600 00
1922		1921	
Jan. 1	E. M. Harris Fund	Jan. 1	E. M. Harris Fund
	5 Liberty Bonds		5 Liberty Bonds \$5,000 00
	Paid R. I. Med. Soc. (for Building)		Interest on same 106 25
			\$5,106 25
	\$5,106 25		\$5,106 25
	Interest on Bonds \$144 00	Jan. 1	Cash on Hand Jan. 1, 1921 \$2,970 98
	Collations 579 22		Annual Dues 3,400 00
	Printing and Postage 112 51		Donations 793 83
	Expenses of Secretary 41 50		Ely Fund, Interest on Bonds 74 00
	Fuel 586 03		Interest on Daily Balance 37 44
	Electricity 53 97		\$7,276 25
	Telephone 67 24		
	House Supplies and Expenses 120 03		
	House Repairs 153 54		
	Insurance 15 00		
	City Water 10 21		
	Safe Deposit 6 00		
	Librarian 1,258 31		
	Books 78 00		
	Journals (Ely Fund) 59 00		
	Safe 50 00		
	Janitor 396 00		
	Tablet and Picture—Dr. Hersey . . . 83 90		
	Rhode Island Medical Journal 400 00		
	Paid Loan to Sinking Fund 1,427 67		
	\$5,642 13		
	Cash on Hand to Balance 1,634 12		
	\$7,276 25		

May 15, 1922. Examined and found correct.

J. F. HAWKINS

BERTRAM H. BUXTON

Auditors.

The Secretary read his annual report, as follows:

ANNUAL REPORT OF THE SECRETARY, 1921-1922.

I beg leave to submit for your consideration a brief review of the activities and condition of the Rhode Island Medical Society as provided for by the constitution and by-laws of the Society.

There have been held three quarterly meetings during the fiscal year 1921-1922, the September meeting being held at the State Hospital for the Insane, through the courtesy of the Penal and Charitable Board.

The membership roll of the Society at present comprises: 379 active members, 26 non-resident members, 9 honorary members.

The following Fellows have died—William J. Burge, May 28, 1921; Russell M. Church, December 22, 1921; Frank H. Jenckes, October 13, 1921; Edwin S. Kiley, October 13, 1921; Joseph W. Bannon, March 16, 1922.

The following Fellows were dropped from membership for non-payment of dues—Wm. G. Dwinell, G. S. Ghazarian, Jas. H. Haberman, John D. McGuire, Joseph Myre.

The programs of meetings for this year have been of diversified interest and have shown a tendency to revert more to the utilization of the talent of the members rather than to the importation of notable essayists from without the State. Previous annual reports of the Society have referred to this subject and it is a source of gratification that the expectations that Fellows of the Society would be able and glad to present papers of interest and scientific value have been realized and the officers of the Society to whom is entrusted the task of preparing the programs are therefore encouraged to continue along the lines of this year.

There are certain advantages accruing to an organization such as this in being representative of a small community like Rhode Island and there are also some disadvantages. The most glaring disadvantage to the Society and to the medical profession of the State is the tendency to give too much consideration to membership in large districts, such as Providence, to the subordination of the smaller, more remote, but equally as important sections from which our membership is made up. Several factors have innocently but insidiously contributed thereto—such as the actual and relative greater medical population in Providence, the location of the Medical Building here, the

greater hospitalization of cities as compared to country, etc. The problem which confronts the Society is how to arrange its meetings, programs, etc., so as to make the Society have a real appeal to all the physicians in the State. The hours of meeting of this Society of late have been predicated too much upon consideration of the office hours of Providence members and too little upon the duty it owes to the whole Fellowship throughout the State. That duty is explicitly stated in Article II. of the By-Laws, which reads, "The purpose of this Society shall be to federate and bring into one compact organization the medical profession of Rhode Island." The office of Secretary of this Society is kept in close communication with similar offices in our neighboring State Medical Societies and I can assure you that the comparison of our two-hour meetings with the one- and two-day meetings of sister organizations puts us to blush.

I believe that a partial solution of the difficulty is to be found in having our meetings at an hour more suitable to out-of-town members, in having programs on a variety of subjects by at least a dozen papers, and the bulk of these papers to be presented by home talent. While in this pessimistic and fault-finding state of mind, permit me to call your attention to the shrinkage in membership of this Society. Membership in the State Society comes through membership in the District Societies and unless the Secretaries of the District Societies keep this office apprised of its new members, as the By-Laws of the State Society and District Societies provide, the Secretary cannot know to whom to send invitations to join. I, therefore, appeal again this year to the District Secretaries to send this office a list of its members and to keep it up to date by notification of added members.

Owing to the prolonged illness of the janitor of this building, it has been necessary to procure the services of another and the Chairman of the Board of Trustees, after several meetings of the Board, was instructed to engage a new janitor.

Additional insurance upon this building to total \$30,000 and new insurance of \$10,000 upon its contents was considered to be the minimum of safety, and by order of Council, such amounts have been placed.

In the absence of the Treasurer, Dr. W. A.

Risk, for several months, that office has been temporarily filled by the Secretary. As Dr. Risk returns this month and will be ready to resume his duties as Treasurer of the Society, I cannot relinquish the duties thus imposed upon me without expressing my sincere appreciation of the faithful and consistent services of our Librarian, Miss Grace Dickerman, without whose help I could not have handled the extra work this office entailed.

It is also a privilege and pleasure to acknowledge publicly the cordial relations and helpful consideration that have been accorded me by the President, Dr. Mathews, and the Chairman of the Board of Trustees of the Library Building in the solution of the many problems that have arisen in connection with the affairs of the Society.

Reports of the Standing Committees were made by the respective Chairmen as follows: 1. Committee on Arrangements—Dr. C. A. McDonald reported that arrangements had been made for the Annual Dinner to be held at Turk's Head Club. 2. Committee on Legislature, State and National: Dr. Frank T. Fulton—There has been during the past Legislative Session no attempt to enact any bad medical legislation, and thus there has been no opposition work for the Legislative Committee of this Society. There have been a few constructive measures more or less directed in favor of public health, which were introduced into the Legislative body, some of which have become laws. None of these, however, originated in this Committee.

What would seem to be a very important step in the co-ordination of efforts towards securing good medical legislation was taken last winter, when, upon an invitation of Dr. Frederick Green of Chicago, Secretary of Public Health Council of the American Medical Association, the Legislative Committees of New York, New Jersey, Massachusetts and Rhode Island met in New York for a conference. This conference was held during the Christmas holidays. There were in all 16 men present; from New York 2, from Massachusetts 4, from New Jersey 8, and from Rhode Island 2, namely: the President of your Society and the Chairman of your Committee. The session lasted practically the entire day, and there was very free, frank discussion. The plan which Dr. Green had to propose was that the various States should keep in more or less touch with each

other and should attempt, as far as practicable and desirable, to enact the same general type of Legislative measures, at the same time recognizing that the local conditions would have to be met. It is the purpose, we understand, to have some such conference as this at least once a year.

The New York Legislative Committee is probably the most active of any of the States. Their work is very well organized, and is being made better each year. This year they sent out each week a bulletin to each County Society, stating what measures had been introduced into the Legislature, stating whether they were good and deserved support, or were bad and deserved active opposition, and each week stating the progress of each measure, whether it was in the hands of a committee and what committee, whether likely to be acted upon or not, and asking the members of the Society to use their influence with the representatives from their districts; also at times giving the names of the committee in order that they might be approached individually by their home constituents.

As result of this meeting and of the clearer understanding of the New York Committee's plan, your own Committee has asked each of the County Societies of this State to appoint a Legislative Committee in order that the Chairman of each Committee of the various County Societies may meet with your Committee whenever desirable or practicable, so that the County Societies can keep in close touch with the State Legislative Committee, and can use their influence for or against any legislation proposed. Your Committee believes that with such an organization there will be very much greater chance of bringing about good and preventing bad legislation. Such activity as is carried on by the New York State Legislative Committee involves considerable expense. They provide for this in their budget. We hope that before the Legislature again convenes that we may have an organization which may work out some such plan.

3. Committee on Library—Dr. Herbert G. Partidge: The Library has received from June 1, 1921, to May 17, 1922, 331 bound volumes, 197 reprints, 237 pamphlets. Seventeen Fellows have made gifts to the Library, and contributions have been received from many and varied sources.

There are now on the shelves and table in the

reading room, 103 journals. Of these, the Library subscribes for 33; 56 are received through exchange, and 14 are gifts. It is probable that the number of exchanges will be somewhat increased during the coming year, as certain journals which were discontinued, or at least ceased exchanging during the period of the war, will resume their former custom.

The use of the Library, both by Fellows and by the public, is constantly increasing, and it is becoming more and more what it properly should be, a clearing house for matters medical in the State. Many physicians, both Fellows and those not Fellows, come to the Library for reading or research. Others apply to the Librarian for help in finding references and other matters, so that the Library is a real help to many of the profession.

The public, comprising those in many different walks of life, apply to the Library for information on special subjects, and for more general assistance. Questions regarding physicians in other places, hospitals elsewhere, names and dates of meetings of various societies, are asked and answered by the Librarian. It seems certain that this increase in the usefulness of the Library will continue in the years to come.

Certain needs of the Library should be mentioned. Many new books are asked for which we are unable to buy because of our restricted funds, and yet it is very difficult to decide what shall be purchased in order to benefit the greatest number. Shall we endeavor to make the Library a fairly complete working Library, or shall we buy only the books which may be called reference books? By following either course, we shall displease some, and please others, but it would seem that we should look ahead and consider carefully just what books are likely to be of most lasting value.

There has been a little binding of periodicals done during the year. We have many bound sets, some of them very valuable, and it would seem that we ought to keep at least some of these up to date.

4. Committee on Publication—Dr. Frederick N. Brown:

With the publication of every periodical there must always be something yet to be desired; and this is true of the RHODE ISLAND MEDICAL JOURNAL. In the general harmony there have been a few jarring notes.

Reports of literary offerings of our District Societies, near and remote, have lacked something of the promptness and completeness that is to be desired. A report of transactions two months old is not altogether of interest; a correction of this delinquency and of this void would be appreciated.

Certain essential responsibilities connected with the publication of this JOURNAL have been accepted by a group of men and recognized by some of these as an obligation and the appreciated assistance rendered the editorial department is hereby gratefully acknowledged—many pleasant moments have been spent by the editor in contemplation of the cheerful willingness of these contributors. It is a pleasure to report that owing to the efficiency of our business and advertising management, the RHODE ISLAND MEDICAL JOURNAL has passed into a more prosperous era than has been enjoyed by it in recent years and beyond doubt the donation to the Society will exceed by at least 50% that of last year. Upon the whole, the past year has been one of some satisfaction to the Publication Committee and, it is hoped, to the Society.

5. Committee of Education, State and National—Dr. Charles O. Cooke: As Chairman of the Committee on Education, State and National, I report that the Committee has definite plans for next year and the Committee hopes to be continued.

6. Committee on Necrology—Dr. Wm. P. Buffum, Jr.: The following members have died: Dr. Joseph W. Bannon, born August 3, 1889; died March 16, 1922; member of R. I. Society November 1, 1920. Dr. William J. Burge, born April 12, 1831; died May 28th, 1921. Dr. Russell H. Church, born July 2, 1876; died December 22, 1921; member, 1912. Dr. Frank H. Jenckes, born January 26, 1860; died March 13, 1922. Dr. Edward S. Kiley, born September 10, 1869; died October 13, 1921; member, 1908.

Dr. A. T. Jones, Chairman of Board of Trustees of the Medical Library Building, presented the following report: A meeting of the Trustees was held February 6, 1922. It was voted to purchase a supply of coal for the ensuing year, which was attended to, getting a price of fifty cents (50c) per ton less than market price. It was also voted by the House of Delegates to increase the insurance on the building and furnishings

from ten thousand dollars (\$10,000) to thirty thousand dollars (\$30,000); also to place liability insurance to the amount of ten thousand dollars (\$10,000).

These matters have been attended to and we are now sufficiently covered.

Another meeting was held April 6, 1922. Present—Drs. Leech, Mathews, Partridge, R. M. Smith, A. T. Jones.

The subject of janitor for building was discussed (on account of the injury to Mr. Waldron and his prolonged sickness, with the probability of several months more invalidism and also the probability that he would not be able to perform the several duties of janitor when he did get up and about once more). It was deemed wise to procure the services of another janitor. Mr. and Mrs. Waldron received five weeks' notice. The position of janitor was filled May 10. We have a similar arrangement to the previous one: that is, a man and his wife occupying the apartments, the man to give all of his time to the work about the building. It is necessary to pay a small amount more than the previous janitor was getting and by vote of the Trustees the wages of the present man are forty dollars (\$40) per month.

The rug in the Horace G. Miller room has been cleaned and some necessary repairs made upon it. The ceiling in the assembly room has been repaired in two places, so that it is a little less unsightly. Some small repairs have been attended to, such as fixing the coal bins, attending to window cords and weights, which were absolutely necessary.

There has been very little laid out on the building since it was opened and there are many things in the way of painting and repairs that would seem necessary.

The Chairman recommends that some of this work would be attended to as soon as the finances of the Society will permit. I have one quotation for the painting of the Lecture Hall which I will turn over to the next Chairman.

Under the head of new business, the Secretary read a communication from the Secretary of the Woonsocket District Medical Society under date of April 28, 1922, extending an invitation to this Society to hold its September meeting in Woonsocket as the guests of that Society. It was unanimously voted to accept the invitation, with sincere thanks for the courtesy extended.

Dr. Buffum presented at the request of the Providence Medical Association a letter from the advertising manager of the American Medical Association as follows:

"Your members have perhaps experienced difficulty with traffic rules regulating the parking and running of automobiles.

"Several of the medical societies in the larger cities have overcome this evil by using the A. M. A. physicians' automobile emblem. For example, the Academy of Medicine, Buffalo, N. Y., succeeded in having the police officially recognize the physicians' auto emblem; it gives the right of way over all ordinary traffic; and exempts the physician's car from parking restrictions. Elsewhere the emblem has been adopted as the official insignia for members of the medical pro-societies and in Columbus, Ohio, a plan has just been inaugurated for awarding the emblem specially imprinted with the name 'Columbus' for regular attendance at medical meetings.

"Possibly this subject could be discussed at the next meeting of your Society and arrangements made with the city authorities for a special ruling. As the sale and use of the emblem is strictly limited to licensed medical practitioners, the police authorities should welcome the chance to give it official recognition.

"The standard emblem can be furnished immediately from available stocks and on a quantity order, the price to your Society would be \$1.20 each, prepaid. If you can place an order for a minimum of 100, we can, with no extra charge, furnish a special emblem imprinted in blue enameled letters with the name 'Providence' across the lower third of the rim.

"The enclosed colored blotter illustrates the standard emblem. We shall be glad to send a sample emblem to display at your next meeting if you so request. Please write to us for any further information that you may need.

"Very truly yours

"WILL C. BRAUN,

"Advertising Manager."

No action had been taken by the Providence Medical Association except to refer the matter to this Society. Dr. Mowry moved for indefinite postponement of the matter, seconded by Dr. Leech. Motion lost. Dr. Brown moved that a committee be appointed to confer with the city authorities to determine what action the city would

take in regard to the question of giving traffic preference to the automobiles of physicians bearing an insignia approved by the American Medical Association. Seconded by Dr. Partridge. Motion prevailed. The President then appointed as this Committee, Drs. F. N. Brown, H. G. Partridge, W. P. Buffum, Jr. It was moved that the Committee on Legislation, State and National, be requested to investigate and report upon what action has been taken by authorized State officers to check the illegal practice of chiropractors in this State and to report at the next meeting of the House of Delegates. It was so voted.

A communication from Dr. Halsey DeWolf offering on behalf of the Rhode Island Medical Hospital Nurses serving overseas during the World War, a memorial tablet to Dr. Wm. H. Buffum, one of their members, who died while on duty, was read by the Secretary. It was voted to accept the tablet with appreciation and to provide a suitable site for its erection in the Medical Library Building. Adjourned.

J. W. LEECH, *Secretary*.

COUNCIL.

May 19, 1922.

The regular meeting of the Council was held May 19th, 1922, at the Medical Library at 4:30 P. M., Dr. George S. Mathews presiding.

The annual report of the Treasurer was presented by the Acting Treasurer and it was voted that the report, having been duly audited, be received and placed on file.

After discussion of the need of a new stereopticon for the use of the Society, it was moved by Dr. Swarts, and seconded, that a committee be appointed to pass upon the lantern to be secured, with authority to purchase same, suitable for the Society's needs and that the President be the chairman of said committee. It was so voted.

Dr. A. T. Jones, as Chairman of the Board of Trustees of the Medical Library Building, reported that liability insurance had been placed upon the building and it was voted to sanction this expense.

It was voted to recommend to the House of Delegates to make the salary of the Librarian \$27.00 per week.

Dr. Jones reported that it had become necessary to hire a new janitor for the building at \$40.00 per month. It was voted to recommend that the House of Delegates sanction the foregoing.

It was voted that the Council recommend to the House of Delegates granting authority to the Board of Trustees of the Medical Library Building to make repairs and of approval of necessary expenditures therefor. Adjourned.

J. W. LEECH, *Secretary*.

HOSPITALS

PROVIDENCE CITY HOSPITAL

NEWS ITEMS

Beginning in July, the Hospital will be supplied with four internes. Each interne will serve six months and two new ones will go on duty every three months. The services are divided into four parts and change every six weeks. The experience offered will not be confined to house cases but will include clinics in venereal diseases, pediatrics and tuberculosis in the Out-Patient Department.

Dr. Bruce H. Davison finishes a six months service July 1st and goes directly to the Boston Floating Hospital.

Dr. W. Clem Cheney and Wilfred W. Barber, M.D., also finish on July 1st. They are trained in pediatrics, but their future plans are not definitely formed.

On July 1st the following men begin internship; N. A. Funderbuck, M.D., Royal C. Hudson, M.D., Frank Garside, M.D., John Champlin, M.D.

The regular meeting of the Staff Association was held on May 17th, at which time the work of the past year in the Departments of Pediatrics and Medicine were reviewed statistically.

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ORIGINAL ARTICLES

RICKETS AND TETANY IN INFANCY.*

By W. T. BUFFUM, JR., M.D.

PROVIDENCE, R. I.

Rickets is a disease characterized by softening and deformities in the bony structure, malnutrition, anemia, and weakness of the voluntary and involuntary muscles. This produces temporarily a condition of debility which seriously interferes with development and resistance to intercurrent disease. When recovery takes place, there are likely to be serious deformities unless proper orthopedic and medical treatment has been instituted.

Rickets may begin as early as the third month of life, and it ordinarily begins during the first year. The exact causes of this condition are still obscure, but on the other hand we know in a general way under what conditions the disease develops.

The factors of most importance are included in diet and digestion. Rickets is common following indigestion, with failure to gain in weight in feeding cases. Rickets is more common among the artificially fed than among the breast-fed babies and one would assume that this is chiefly because indigestion is more common among the bottle-fed.

Rickets is not uncommon among breast-fed babies. This occurs sometimes when the mother has plenty of milk and the baby shows no signs of indigestion. It has been suggested that this may be due to a decrease in the mineral content of the mother's milk caused by a diet deficient in fruits and vegetables.

As regards bottle feeding, there has been a feeling that rickets is more common among infants fed on cooked milk than among those fed on raw milk mixtures. This is probably true. It is certainly true that rickets is common among babies fed on proprietary foods. The proprietary foods, in addition to being cooked and dried, also give a poorly balanced ration, high in carbohydrate and usually very low in fat and protein.

I do not believe that it is usually advisable to feed babies on raw milk in Rhode Island. Tuberculosis is prevalent among the cattle here. A few herds only have been certified by the Federal government as being free from tuberculosis, and except for milk which comes from these herds, I believe that milk fed to babies should be pasteurized or sterilized.

The tendency of this milk to produce rickets, if there is any such tendency, can be easily eliminated by the addition of small amounts of cod liver oil to the diet when necessary.

Second only to the diet in importance in the etiology of rickets is sunlight. Under ordinary circumstances rickets does not occur if the exposure to sunlight is adequate. Active rickets is found chiefly in February, March and April, following the months when there is the least sunlight and when the weather conditions make outdoor airings difficult. In May and June there is some tendency for the rickets to heal even if the baby is out of doors very little.

In certain country communities where the children are out of doors constantly, rickets is hardly found, while in nearby cities it is very common. It has been demonstrated recently that exposing babies to the direct rays of the sun causes rapid healing of existing rickets.

Experimental work on rats by Powers, Park and others was recently performed as follows: Rats were placed on a diet which under ordinary conditions produces a condition identical in its main features with rickets as seen in human beings. This diet is low in phosphorus and has an insufficient supply of fat soluble "A" vitamins. Eighteen of these rats were exposed to sunlight for an average of four hours a day for two months. They did not develop rickets. Six control rats kept under conditions of ordinary room light developed rickets.

The first sign of rickets when it appears in early infancy is generally craniotabes. This consists in a thinning of the parietal bones. It is recognized by the yielding and crackling of these bones when pressed on firmly. By watching for this, rickets

*Read before the Rhode Medical Society June 1, 1922.

can be noted at an early stage and can be promptly arrested.

Beading of the ribs, forming the so-called rosary, is also an early sign. Later appear the square head with enlarged fontanelle, and the general enlargement of the epiphyses of the long bones, especially noticeable at the wrists. The deformities may appear early, the most noticeable being the bending of the tibiae. These produce the exaggerated forms when the infant begins to walk before the rickets is healed and the bones hardened.

Equally important with the bony condition is the general debility and impaired health of the whole organism. The voluntary muscles become flabby, adding to the deformity of the trunk. The digestive tract functions poorly, causing indigestion and constipation. The resistance to infections is lowered, with resultant chronic infections in the nasopharynx and also an increased mortality during acute infections.

In uncomplicated rickets the prognosis is good. There may, however, be a background of indigestion or chronic infection which makes the outlook less bright. A severe intercurrent infection such as pneumonia is always to be dreaded while the rickets is active. The degree of deformity which will remain depends on the individual case and on the length of time elapsed before appropriate treatment is commenced.

Recent experimental work by Howland and Kramer has shown that in infants with rickets the *calcium* of the blood is approximately normal, while the inorganic *phosphorus* of the blood is constantly diminished. That as the rickets heals, the phosphorus rises to normal, and as the rickets relapses the phosphorus is diminished definitely below the normal. Also, it has been demonstrated that feeding of phosphorus will increase the calcification of bone and arrest the rachitic process. Apparently the diminished amount of phosphorus in blood is closely connected with the fundamental cause of the disease.

The pathologic process which takes place in the bones is in general one of softening. At first there is vascularization of the epiphyseal lines and of the medulla. Then there is hyperplasia of the cartilage cells, defective calcification owing to the lack of deposition of lime salts, and the formation of osteoid tissue under the periosteum. In this stage there is an excess of organic bone material over

inorganic material. Later, when calcification takes place, the contour of the bone is abnormal and may be much deformed.

THE TREATMENT OF RICKETS.

In the first place, the child should be on a well rounded diet suitable to the age and digestion of the individual. It is important that any indigestion should be straightened out as soon as possible. Vegetables, fruits and meat should be given when the baby is able to take them.

The medicinal treatment consists chiefly in the administration of cod liver oil. Park and Howland have recently demonstrated on infants with rickets, that cod liver oil acts as a specific, and that after two or three months administration the rachitic bones become thoroughly calcified. It would seem reasonable to add phosphorus to the cod liver oil, as the phosphorus has been shown to be useful by itself, and this is commonly done in the form of oil of phosphorus.

Sunlight is a most powerful agent in the cure of rickets. Recently Hess and Unger treated five babies by exposing the skin to the direct rays of the sun for several hours a day. All the cases were markedly benefited and in one the healing process could be demonstrated by the X-ray 13 days after the beginning of treatment. An essential part of the treatment is evidently to keep the baby out of doors as much as possible during the hours of sunlight, and the direct rays of the sun on the skin are of benefit.

TETANY IN INFANCY.

Tetany is a disease closely related to rickets and generally associated with rickets. It is characterized by convulsions, spasms of the larynx, or contractions of the hands and feet, sometimes by a combination of these manifestations. It is the most frequent cause of convulsions during the late winter and spring and is nearly always the cause if there are as many as four or five convulsions in one day. It is also a common cause of irritability and failure to gain in weight.

The *etiology* of tetany is obscure. It occurs chiefly in association with the milder degrees of rickets, but is occasionally seen when there are no signs of rickets. From the frequency of the occurrence of rickets and tetany together, it is probable that the causes of the two conditions are sim-

ilar. Tetany is most commonly seen at from four months to one year of age, but is not uncommon during the second and third years.

The active manifestations appear almost exclusively during February, March and April, the same months during which active rickets is seen. The occurrence of these symptoms during the late winter and early spring is probably due to the slight exposure to sunlight during the winter, as it has been shown that the sun's rays will cure tetany.

Diet is evidently a factor in producing this condition. Tetany is comparatively rare among the breast-fed. It is not uncommon among babies fed on raw cow's milk and it is undoubtedly most common among those fed on pasteurized milk, dried milk and the proprietary foods.

Acute infections will bring on violent manifestations in a case that has been latent. The pain of teething also may produce active symptoms. Convulsions occurring during teething are usually due to tetany.

The three most striking symptoms of tetany are convulsions, spasm of the larynx and contractions of the hands and feet.

The convulsions may occur spontaneously, without any obvious exciting cause. More often they appear during teething or some mild infection. They are apt to be of rather short duration and to recur frequently. A history of recurrent convulsions, sometimes as many as ten in one day, is almost pathognomic of this condition. Constipation favors the recurrence of convulsions.

The spasm of the larynx, known as laryngismus stridulus, is less common but is very striking when it occurs. The baby begins to cry and suddenly his breath is shut off. He becomes cyanotic and sometimes intensely so. Then his larynx relaxes slowly and he begins to breathe with a loud, high pitched crowing sound. This may recur many times during the day and cause considerable lowering of vitality.

The carpopedal spasms form the condition which was originally called tetany. The feet are held in a position of inversion and plantar flexion. The hands are rotated inward and flexed, with the fingers extended.

A constant feature of tetany is the restlessness and irritability of the baby. He is more or less

fretful and fussy and if the condition is at all marked it is obvious that he is not well.

In addition to these manifestations there are certain diagnostic signs.

Choostek's sign consists in a twitching of the upper eyelid when the upper branch of facial nerve is struck with a finger or percussion hammer; or the twitching of the corner of the mouth when the lower branch is struck. In older children this sign may occur without having much significance, but with children under two years of age it only occurs in tetany.

Trousseau's sign is the contraction of the hand into the tetany position, when the blood vessels of the arm are constricted. This sign, if found, is supposed to be proof positive of the disease, but unfortunately it is difficult or impossible to obtain in most cases.

The galvanic current now furnishes us with the best diagnostic test. The current is passed through the body of the patient, one electrode being in contact with the skin at the head of the fibula and over the peroneal nerve, and the other electrode with the skin of the abdomen. If the *cathodal* electrode is over the peroneal nerve, it is noted that a current of two milliamperes, or less with calise, as the circuit is closed, a contraction of the peroneal group of muscles which flex the foot dorsally. This reaction with such a small current is very suggestive of tetany.

If the anodal electrode is in contact with the skin near the personal nerve, it is noted that a greater current is needed to cause a contraction when the circuit is closed than when it is opened. This occurs only in tetany in early infancy and is very suggestive even in older children.

Recent experimental work has shown that in tetany there is a diminished amount of calcium in the blood, in contradistinction to rickets, in which it is the phosphorus which is diminished. Other experiments have shown that in animals after removing the *parathyroids*, the calcium in the blood is diminished and tetany appears, and that after intravenous administration of calcium the tetany is temporarily relieved. Considerable work has been done which seems to indicate that the neuromuscular irritability in this condition is directly due to the diminished calcium in the blood.

The prognosis in tetany is excellent if there is no serious disease coexistent.

The treatment of tetany, in addition to the general hygienic measures suggested for rickets, consists in certain specific medication. The condition is relieved very rapidly by the administration either of cod liver oil with phosphorus, or of calcium chloride. With either treatment relief is to be expected within 24 hours.

If the symptoms are active, sedatives must be given to ensure against the possibility of some serious accident before this relief is obtained. Magnesium sulphate hypodermically or bromides by mouth are the agents of choice.

Rickets and tetany are both common diseases and their recognition and treatment in early infancy is of considerable importance.

SOME ASPECTS OF THE TREATMENT OF DIABETES.*

BY ALEX. M. BURGESS, M.D.
PROVIDENCE, R. I.

There are several reasons why a knowledge of the treatment of diabetes is of more importance to the family practitioner today than it ever was before. To begin with, diabetes is a disease which usually lasts for years and but a small proportion of diabetics can keep in touch with those specialists who are making the study of the disease their main interest. Furthermore, it is estimated that the general adoption of the newer methods of treatment of diabetes has increased the average life of the diabetic nearly forty per cent. In the meantime but little has been done that will be likely to decrease the occurrence of diabetes. The prevention of obesity, as Joslin has pointed out, may, as the years go on, prevent the development of many cases of the disease but it is extremely unlikely that this timely warning will have any appreciable effect in the near future. If there are, as is estimated, a million diabetics in the country today and their expectation of life has been increased forty per cent. while the development of new cases continues as before, it is self-evident that the number of live people suffering from diabetes and needing care will be much greater than it was before the span of life of the diabetic was lengthened. Another reason why every general practitioner should be familiar with the modern

methods of treatment of diabetes is because so much more can be done now in the way of guiding the patient safely by those pitfalls which must ever lie in his way even when he has been successfully treated and is carrying on his daily life normally and living well within the limits of his tolerance. For example, a young man who has been under the care of a specialist in a large city has done very well and having been duly instructed in all that pertains to the ordering of his diet and daily life is allowed to go back to his home town and to resume his business. All goes well until he suddenly develops acute appendicitis, or measles, or perhaps acquires a severely septic finger, or breaks a leg. The responsibility for his care must now be taken by the family doctor at just the time when expert skill is most needed. The presence or absence of that skill may be the deciding factor in the outcome.

Granted, then, that the general practitioner must acquire a good working knowledge of the best methods of treating diabetes and its complications—it must be confessed that he is likely to find the road that he must travel rather rough and beset with many signboards pointing both ways. He will find that many of the questions which he will ask cannot be satisfactorily answered, and that those special workers in this field who must be his teachers are still far from perfect agreement in regard to many important points.

In addressing you today, it has seemed wise to me to lay especial emphasis upon those phases of the subject which appeal to me as being not only of especial importance but also veiled in a certain amount of obscurity if one attempts to elucidate them by means of a perusal of the current literature on the subject. I have chosen the following main topics for a discussion:

1. Routine treatment of the disease.
2. Types of diabetes.
3. The use of high-fat diets.
4. Acidosis. Certain points regarding its occurrence and treatment.
5. Surgical complications of diabetes.

1. ROUTINE TREATMENT.

No one can deal with many cases of this disease without realizing the necessity for individualizing and not attempting to make a hard and fast set of rules which he can apply to all cases. Certain

*Read before the Providence Medical Association June 5, 1922.

principles, however, must be kept in mind. To begin with, the practitioner must have in mind the threefold object at which he is aiming—i. e., first, to extricate the patient from the difficulties in which he is found when first seen—that is to say, to rid him of hyperglycaemia and acidosis and any attendant symptoms; second, to determine for the patient a proper maintenance diet on which it is hoped he can live and carry on his affairs; last, and by no means least, to teach him what he must know to keep himself as far as possible out of danger. This last phase of the treatment involves not only instruction in simple dietetics and the urinary tests for sugar, but also specific warnings as to the danger of infections, operations and accidents, and a definite attempt to persuade the patient to keep himself permanently under some degree of observation by reporting at stated intervals for examination and a test of the fasting blood sugar. In rendering the patient sugar-free, various methods are applicable. In mild diabetes a few days of simple reduction in the total carbohydrate intake, with a slight lowering of the total caloric value of the food to just below the energy requirement, may be sufficient, or a complete fast of thirty-six hours may be considered easier. In severe diabetes, on the other hand, or in diabetes complicated by infection, it must always be remembered that sudden changes in diet are dangerous. The endogenous factors of food supply, that is to say, the fat and protein of the patient's own body, must always be kept in mind, as Woodyatt has so clearly pointed out. It is certainly advisable to try feeding a high proportion of fat to certain thin patients who have severe diabetes in order to spare their own body protein, if this is done in such a way that their total utilizable carbohydrate which is available for metabolism is not less than two-thirds the intake of fatty acids. In estimating the total available carbohydrates, as Woodyatt recommends, one adds to the carbohydrates as ordinarily reckoned, 58% of the protein and 10% of the fat, and considers 90% of the fats as fatty acids. For the great majority of patients, however, a simple method of gradual dietary reduction by a series of test diets, such as those used by Joslin, is convenient, safe and efficient. In these, the amounts of carbohydrates and protein are gradually reduced from day to day, while the fat is early eliminated and, if the patient is not

sugar-free at the end of the fifth day, he is put on one day of fasting. I shall refer to methods of determining proper maintenance diets under the discussion of the use of high fat diets and acidosis.

2. TYPES OF DIABETES.

From what has already been said it is clear, however, that a scheme of test diets, such as that just mentioned, should not be applied indiscriminately to all cases, nor was it so intended by its author. It is especially applicable to the average fat diabetic, and, as Joslin has pointed out, the average diabetic is, or has been, fat. This leads us to a consideration of the different types of diabetes.

Recently Wilder has discussed the probability that diabetes, like nephritis, is the result of various types of lesions, and he has classified 298 cases observed at the Mayo clinic into five groups with reference to possible differences in their etiology. Brigham has suggested a somewhat similar grouping. I have grouped according to the classification of Wilder the last fifty cases that have come under my observation in the out-patient clinic at the Rhode Island Hospital and the cases which have come under my observation in private practice since December 1, 1919, also fifty in number. (Table 1.) I have separated the cases occurring in children from the others under Type 1, because only one of them is to be considered true acute diabetes and has progressed to a fatal outcome in coma, while three of the others are mild, and one is apparently of the true renal type. A large proportion of those patients classed under Type 2 have shown marked obesity as well as evidence of vascular lesions.

TABLE 1.
Types (Wilder's Classification).

	1.	2.	3.	4.	5.
R. I. Hospital...	4	(Children*) 12	21	0	13
Private Records.	11	(Children 3) 12	18	0	9
Total (100 Cases)	15	24	39	0	22
Wilder's Cases					
(298)	19%	30%	15%	18%	18%
*One "renal diabetes."					

EXPLANATION OF WILDER'S CLASSIFICATION.

- Type 1.—"Acute" diabetes—abrupt onset, usually progressive, lowering in tolerance. Most often seen in young people.
- Type 2.—Vascular diabetes. Associated with hypertension or arterio-sclerosis.

Type 3.—Diabetes of obesity. Not associated with vascular changes.

Type 4.—Interstitial pancreatitis. Usually associated with disease of biliary tract.

Type 5.—Persistent Glycosuria, unclassified.

3. THE USE OF FAT IN THE DIET.

The relation of obesity to diabetes appears definite. Joslin, in a recent publication, quotes Mr. Mead of the Lincoln National Life Insurance Company as demonstrating that diabetes increases with age only as obesity increases and that it occurs to about the same degree in thin people, both old and young. Thus the problem of treating diabetics who are fat must differ from that of treating those who are thin. In both the principle of undernutrition, so well established by the work of Allen, must be the mainstay. In the fat, the obesity must be reduced, and if that is done early the battle against the diabetes is already half won. The use of fat in such patients is usually unwise, as their endogenous fat supply is large, must be reduced and will be active in sparing their body protein during the period of desugarization. The permanent improvement in tolerance that goes with the elimination of obesity is often very striking. I have recently had under my observation two patients who illustrate this point in a very striking manner. Both had been distinctly obese, one rather extremely so, and both had suffered for years from diabetes of rather a mild type. With extreme loss of weight, due in one case to malignancy and in the other to progressive arteriosclerosis with mild senile dementia, the tolerance of both was increased to such a degree that cane sugar could be taken without the appearance of sugar in the urine. Both were markedly arteriosclerotic. The second of these patients, following the excessive loss of weight, developed a strangulated inguinal hernia and was operated on under ether anesthesia without the appearance of sugar, acetone or diacetic acid in the urine. He has been sugar-free for the past two years.

In dealing with the obese, then, the plan should be to remove the obesity. When, on the other hand, we deal with those who are already undernourished, our aim should be to give them food sufficient for their protein and energy requirements, if possible, and to prevent the undernutrition from becoming too pronounced, and still to maintain them in a condition of moderate undernutrition. Maintenance diets which contain a high

percentage of fat may be necessitated by the low tolerance of the patient for carbohydrate in order to fulfill his energy requirement, but it is probably well to feed him as much carbohydrate as his tolerance will allow. Joslin suggests that the use of a diet in which carbohydrate is unnecessarily low and the fat is correspondingly high is likely to result in the fixation of the patient's tolerance at a lower point than it would otherwise reach. Hypernutrition must in all instances be avoided. Lelercq, working with Allen, has recently demonstrated that hyperglycaemia is produced by adding excessive calories to the diet in the form of either fat or alcohol, and without increasing the intake of carbohydrate.

The use of fat in case of thin patients while desugarization is being carried out, in order to spare protein catabolism and allow of a greater reduction in the carbohydrate that is actually being utilized, is a measure the logic and practicability of which has clearly been demonstrated by the work of Woodyatt and of Newburgh and Marsh. The best general statement we can make regarding the use of fat is that the work of these men has shown that it is possible to use it in many patients with safety and advantage, so long as the total calories of the diet are still kept low enough to achieve the required degree of under-nutrition.

4. ACIDOSIS.

There are several facts regarding the acidosis of diabetes which will bear emphasis. Much has been said recently about the exact proportion of carbohydrates to fats in the diet which theoretically ought to prevent the formation of ketone bodies from the fats and proteins in uncomplicated diabetes. The 1 to 1.5 ratio for glucose from all sources to fatty acids, as worked out by Woodyatt, is undoubtedly correct, for diabetes in the absence of complicating conditions. We must, however, remember that the conditions which favor the development of acidosis in the diabetic are many of them still unexplainable on the basis of the amounts and kinds of nutritive material available for metabolism. For example, infection of all sorts seems invariably to favor the production of acidosis, where it is a general toxæmia or an apparently localized process. The prompt disappearance of acidosis following proper surgical treatment is often very striking. I recently had

under observation a patient who, while living well within her tolerance, which was moderately high, suffered from an almost afebrile, mild attack of mumps. During the entire period of the disease, which lasted about eight days, diacetic acid was constantly present in the urine, and it promptly disappeared after the symptoms cleared. It is possible that increased protein catabolism is the cause of the ketonuria in these cases.

Another point which must be remembered is that *severe* or *fatal* acidosis may occur in *mild* diabetes. Thus intercurrent disease, infection, operation and, above all, other anesthesia are especially dangerous. I saw a patient recently who had undergone a long operation with ether anesthesia. Urinalysis both before and also the day after the operation showed the absence of sugar. Nevertheless, on the fifth day he died in coma. It was discovered that he had had a mild diabetes for ten years, a fact which for some reason he always wished to keep concealed and had been unwilling to tell his surgeon. The mild diabetic must be particularly warned and must be carefully treated when he becomes the subject of infectious disease or when operation is necessary.

I shall not enter upon a complete discussion of the treatment of acidosis and impending coma. The general principles involve keeping fat from the diet, keeping proteins low and feeding up to or even at times beyond the limit of carbohydrate tolerance. In case of impending coma the use of orange juice and oatmeal gruel, to supply the carbohydrate, with an excessive amount of fluid—as Joslin insists—at least a liter every six hours in any way that it can be retained, by mouth or by rectum, subcutaneously or intravenously, is appropriate. The reasons for not using alkalis are well stated by Joslin in his most recent publication on the subject. On the basis of my own experience, as far as it goes, I believe that alkalis should not be given. Joslin's statement that he has seen acidosis persist and progress to fatal coma when the urine had been rendered alkaline by the use of bicarbonate of soda, is convincing.

5. SURGERY IN DIABETES.

In dealing with conditions in diabetics which de-

mand surgery, two courses may be followed, namely, either the diabetes may be disregarded and the surgery performed forthwith as indicated, or, unless the surgical indication is extremely urgent, the patient may be prepared by diet with the idea of eliminating hyperglycaemia and acidosis, and the surgery then undertaken when it is supposed that the patient is better able to stand it. This latter method has been used quite generally, but Joslin condemns it on the ground that the diabetic condition cannot ordinarily be successfully improved in the presence of a surgical complication and that the chances for the patient are much better if the surgery is done as soon as possible and the patient then consigned to the care of the medical man to do what he can with what there is left. In his recent excellent article on "The Treatment of Threatened and Real Gangrene in Diabetes," on the other hand, Bernheim recommends careful medical preparation for surgical procedures. Two cases that have occurred in my own practice stand out prominently in my mind. One was an old man on whom Dr. Matteson performed a much-needed prostatectomy and another a young woman on whom Dr. Porter did a Caesarian Section, also much needed. Both patients died. Both died without showing a trace of diabetic acidosis. Needless to say, the surgery in both instances was performed with the utmost skill. I cannot escape from the impression that the under-nutrition which was necessary in correcting the diabetes reduced the resistance of these patients to such a degree that it became the main factor in bringing about the fatal issue. I believe that surgery which cannot be delayed indefinitely should be done at once, and that a careful but limited period of preparation is liable to leave the patient a worse operative risk than he was before it began.

The foregoing is an incomplete and fragmentary attempt to bring to your attention some of the interesting phases of the treatment of diabetes. Every year sees new advances in the field, and with the increased interest in the subject and the new facts which are constantly coming to light, the future of this work may, and, we may hope, will be extremely bright.

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EDITORIALS

THE PROFESSION AND THE PUBLIC.

Two recent addresses by recognized leaders of the medical profession are most significant in showing the relation that should exist between the profession and the public.

Dr. George E. deSchweinitz, in his speech of acceptance of the presidency of the American Medical Association, stated that a "transition from individual to organized practice already has begun," intimating that the attitude of many physicians in

attempting to maintain the strictly private relation of physician and patient, and in wishing to abolish the community hospitals and health centers, was not the true attitude of the progressive physician. As he says: "The public is not satisfied with a service that is devoted only to the cure of maladies and the mending of injuries, but is very much alive to the advantages of the prevention of disease and the conservation of health."

In an address before the California State Medical Society on "Medical Education of the Present and Near Future," Dr. Ray Lyman Wilbur, Pres-

ident-elect of the American Medical Association, has some interesting things to say about the relation of the physician to the public. He believes that preventive medicine has changed the attitude of the practitioner to his patient and the community. Formerly the physician treated the patient only, but now "he must remember that the sick man is a social unit." It is necessary "to establish proper relations of the sick individual to the community." It is as important for a sick man out of a job to obtain "light work and mental repose as well as a diet and nitroglycerin for his high blood pressure." To be able to give this service to the community, there are new forces that should be used in the proper way. These forces are here to stay and are represented by the trained nurse, the dietitian, the laboratory workers and the social service workers. These forces have been accepted by the public and the physician should learn to use them in a co-operative way, always maintaining his own leadership. If he attempts to oppose these forces when properly used and directed, then he will tend to diminish the respect on the part of the public for the medical profession.

THE CHIROPRACTOR.

The irregular cults have always claimed a certain portion of the population as their legitimate prey and this fact has been recognized from the earliest dawn of history. With every succeeding generation the irregular practitioners become more successful in their methods. It is interesting to note that the chiropractor has taken advantage of one of the greatest aids to medical practice, the X-ray, only to use it in a pseudo-scientific manner which does impress certain patients, but must react in the end to his own disadvantage. Chiropractors are now in the habit of sending their patients for X-ray examinations of the spine, but they will permit no interpretation of these plates except by themselves. Any little irregularity in alignment due to the position in which the patient is lying when the picture is made or due to a tilt in the tube, is pounced upon as an indication that the spine is out of plumb. This method of examination impresses the average intelligent person as being scientific, unless he thinks deeply in the matter or has his attention called to it by some physician familiar with the physics of the X-ray. This means that considerable harm is being done and

considerable money is needlessly taken from patients, many of whom can ill afford it.

Another interesting development is the fact that many osteopaths have found that they cannot depend entirely upon manipulation for the cure of certain back conditions, but are using adhesive plaster strapping and belts, as do their confreres of the regular school. We believe that the tide has begun to turn. These practitioners have over-shot the mark and there is a feeling which, we believe, will become stronger in time, that their activities should be limited. We venture to predict that in another generation their numbers will be greatly diminished and that the good they have accomplished will be taken into the regular school. In the meantime, we should not relax our vigilance, but should oppose with all our force, the further practice of these cults unless they can pass the examinations in the fundamental sciences of medicine which are required of all of us before we are allowed to practice upon the public.

IS THE DOCTOR A GOOD CITIZEN?

Very few people today stand out prominently as possessed of either superior intelligence or education. It has been said that to "know something of everything constitutes intelligence and to know something of everything is skill." Years ago, the physician was accorded the reputation of knowing nearly everything having to do with the treatment of diseased conditions to which the human flesh is heir; incidentally, he was not infrequently called upon to advise in matters that were remote in thought from his field of professional activities. The eligibility of prospective swains; the investment of money; the transfer of property. He wrote wills and acted as administrator of estates; he was considered to be not only an intelligent man but altogether an educated man; one whose opinion was sought after and respected.

With the progress of recent years, however, education has become not only general but common, and people began gradually to ignore him; when troubled with the toothache, the dentist was sought, and the lawyer for legal advice; willy-nilly, he has been crowded (and properly) into his own sphere of work; today he is a cog in the wheel, important even as the plumber is important—in case of accident. And still by some atavistic psychology, he clings to the graceless heritage of

exclusive superiority, failing to realize that he is first a man, then a citizen, and finally a physician, which last is only a chosen field of work.

Common expectancy is that as a man he shall be upright and honorable and as a physician he shall at least be ordinarily skilled, and taken all-in-all, he is usually able to respond "present" to both.

Notwithstanding that he often gives of his time to the needy and as circumstances permit, money to charity, in the progress of modern affairs he is not abreast of his responsibilities as a citizen; his attitude toward society and the community is that of a non-producer, holds himself aloof from the participation in the forming of laws and rules that govern him, but whines if they offend him or circumscribe his activities or supposed prerogatives. Opportunities for both civic and professional betterment are open if physicians will act together. Never in history has cohesiveness and unity in our welfare, not only in regard to professional affairs, but in good citizenship, been more essential or necessary than now.

Present chaotic conditions in our particular walk of life have not been forced upon us, they have been invited; pains and pills are entirely within our province but hardly less imperative is a sober contemplation as to what destiny shall preside over our activities and rights.

It is the duty of every physician to hold steadfast to good citizenship and to speak and act the right as he sees it, in civic as well as professional concerns, unbiased by "cliques" or partisanship.

To be a man essentially of the community.

ORAL SEPSIS.

A DISCUSSION OF THE SUBJECT BEFORE THE
PROVIDENCE MEDICAL ASSOCIATION

JUNE 1, 1922.

BY FRANK E. PECKHAM, M.D.

Oral sepsis may be considered from more than one viewpoint. As this program is apparently planned to bring out some of these different viewpoints, it would seem that it practically amounts to an experience meeting. Consequently, the subject will be presented in this way and such proof offered as seems best suited to the conditions.

By oral sepsis is meant septic or infectious conditions, acute or chronic, involving the mouth or throat, even extending up into the ear. Right at the very beginning, let us remember that this part

of the anatomy, along with its local physiological processes, is not a separate entity but is only a very small although very important part of the whole economy. The whole physiological machine must be kept in mind, also the fact that there are many intricate parts and that they are all interdependent. One part getting out of order starts a vicious circle which may ultimately extend throughout the whole mechanism.

We have been through an era of reckless teeth extracting and we are still in an era of reckless removal of tonsils. In the vast majority of cases of arthritis the toxins are present because of the faulty function of some of the abdominal organs. The liver, for example, is probably the most important detoxicating organ in the body. It is an especially large organ and when no trouble exists, is extremely efficient. If it becomes clogged or its cells damaged, its function is interfered with and poison from the intestines is absorbed into the system in varying quantities. The tissues of the mouth, throat and surrounding areas are for some reason very susceptible and absorb these poisons readily. The result is that adenoid tissue forms, tonsils become enlarged with, at times, more or less active infection. The point for treatment to attack here is, always, the abdominal organs. This does not mean that the teeth and tonsils and running ears do not need attention. They do, but they do not always need surgical attention. Indeed, with a more intimate knowledge of physiology they are needing it less and less, and when the physiological principles become more generally recognized, the surgery of these parts will be reduced to its minimum.

As far as teeth are concerned, some years ago it was not uncommon for patients presenting with arthritis, to state that they had been advised to have all teeth extracted as the first thing to do. The people rebelled at this and practically compelled a cessation of such malpractice. At the present time careful X-rays are taken to ascertain which teeth should be removed. Now as regards the benefits of such extractions in arthritis. As indicated above, the factory where toxins are made is usually in the abdominal organs. The infection at the apices of teeth and the surrounding tissues, to my mind, is a reservoir rather than the original source. The facts which make me feel this way are repeated so frequently that they are

very convincing. Patient after patient comes in with the story that either certain teeth or all teeth were extracted with either some relief or with so great relief that it was considered a cure. Then after a shorter or longer time the symptoms returned until the patient was just as bad if not worse than ever. This is a very common story.

It does happen, however, that arthritis has been cured by the extraction of teeth. Also I have known of one or two cases of infection where failure to have teeth extracted might very well explain the death which followed.

Regarding tonsils, it makes a difference whether the patient is an adult or a child. In children with enlarged tonsils and adenoids, the majority of those I personally see, are deficient in calcium. The direct result of this is a loss of tone of all tissues, including all muscle tissue. This loss of muscle tone results in the faulty postures which are so common in children. Lymphoid tissues enlarge and hence the tonsils and adenoids. The musculature of the intestines is involved just as all muscle tissue in the body, hence faulty assimilation. With all tissues and physiological processes below par and toxins playing fast and loose through the system, the lymphoid tissues become very susceptible. This same calcium deficiency also explains the fact that about 90% of all school children have defective teeth. Of the more than 200,000 operations for tonsils and adenoids per year in the United States, from my very limited experience it begins to look as if many of them were unnecessary. If the calcium is replaced and its assimilation into the system assured, these tonsils will return to normal and throat disturbances cease. In a recent case where the parents had been told that a pair of large tonsils would never disappear unless removed surgically, the throat is now normal and the colds and attacks of tonsilitis have completely vanished. In some cases such disappearance may be hastened by X-ray or diathermy but in the majority of cases it would not seem to be necessary.

The enlarged tonsils of adult life is a different story. In the arthritis cases it is not uncommon to see the tonsils gradually diminish in size as improvement is obtained under treatment. The treatment consists of stimulating the various organs to do their work properly. The liver and spleen and intestines are important organs. When the func-

tion of the liver is restored, detoxication again takes place. When the function of the intestines is restored, assimilation again takes place and this explains why tonsils shrink and cease to be reservoirs and in adults no longer need surgical attention. These results are all obtained by the various physiotherapeutic and dietetic measures. In adults, as in children, in resistant cases X-ray and diathermy are valuable methods of treatment. In tonsils, as in teeth, cases may need surgical attention, but here also the non-surgical results obtained in a limited experience are so encouraging as to warrant a continuance of the methods.

PROTEIN POISONING.

There are certain proteins which, when introduced into the system, affect the serous and mucous membranes. This was first brought to our attention in connection with joints. For example, a hip joint will become tender and the child will begin to limp. Slowly the leg will be drawn up by muscular contraction. The same condition may exist in the knee or ankle or any other joint. Although these proteins may come from the ingestion of almost anything, depending upon the idiosyncrasy of the patient, yet in my experience they usually come from the ingestion of some kind of meat. By putting the child upon a meat-free diet the symptoms promptly disappear. Then by trying one kind of meat after another it is easy to establish the particular kind. As the child grows older and acquires greater resistance, the particular sensitiveness is usually overcome. The same thing may happen with regard to the mucous membranes of the mouth and throat.

A baby of one of our own members offers a striking example. When the baby was three and one-half months old, the right ear began to discharge. The ear was washed out for four months without any effect on the discharge. At this time the naso-pharynx was curetted for supposed adenoid tissue.

Practically nothing was obtained. Immediately following this operation there was an acute inflammatory attack with a temperature of 103 to 105 and pulse of 140 to 150. There was also a profuse discharge from the nose, a laryngitis, an abscess of the opposite ear, double conjunctivitis, some keratitis, cervical adenitis on the same side as the original discharging ear, with abscess

formation. There was also a papular eczema of the face. The acute condition subsided after three or four weeks but the original ear continued to discharge one or two teaspoonfuls daily.

About a year from the onset there was a well marked improvement for a short time.

All this time the baby had been on a mixture using top cream. After the ear had been discharging one to two teaspoonfuls of pus for 20 months the baby's diet was changed to boiled skimmed milk. There was a sudden cessation of the discharge occurring inside of 48 hours. This improvement lasted for one month, when measles developed, and the original formula of top cream mixture resumed. Almost immediately the discharge began just as profuse as ever. After nine or ten days with the omission of cream and the use of skimmed milk the discharge promptly ceased. Quite some time later an attack of tonsillitis developed. On the omission of milk from the diet the tonsillitis promptly subsided.

It is easy to see that if acute poisoning will take place, as actually demonstrated in the above case, it is not difficult to believe that slow or chronic poisoning also takes place, resulting in a thickening of the tonsil tissue and a proliferation of adenoid tissue. With this visualization of the process, actual practice seems to be resulting in positive proof, in that, with proper treatment, these tissues return to a normal condition.

From my personal experience, therefore, it will be evident that my conclusions must be:

1. That in the majority of cases the pus collections in the apices of teeth and in tonsillar tissue are only reservoirs and not primary foci.

2. There are times when undoubtedly extraction of teeth and surgery of tonsils are imperative.

3. The studies as outlined above offer proof that there will be an increasing number of children whose tonsils and adenoids may be successfully taken care of without surgery. That there will be an increasing number of adults (suffering from arthritis) whose tonsils will slowly be restored to normal under the ordinary physiotherapeutic treatment for the arthritis with or without the aid of X-ray or diathermy.

CASE REPORT

ACUTE EXACERBATION OF A CHRONIC NEPHRITIS WITH UREMIA; COMPLICATED WITH FRAC- TURED AND DISLOCATED CERVICAL VERTEBRAE.*

EDWARD G. MELVIN, M.D.

With the permission of Dr. Charles O. Cooke, I am presenting the following case, which was on the second surgical service of the R. I. Hospital, in order to show the advisability of an early examination of the eye grounds in any suspected case of nephritis.

Patient R. K., Brown student, age 20, entered hospital February 27, 1922, with the following story:

While wrestling, patient was thrown to the floor, landing heavily on the base of his spine. Following this fall, patient stood up, felt dazed, and toppled right over, neck feeling paralyzed. He remained dazed until he was sent into the hospital by Dr. Bugbee.

His chief complaint on entrance was weakness, inability to stand or to hold his head up.

Family history was essentially negative. Patient's past history: He had typhoid and diphtheria and an acute mastoid in childhood. Otherwise negative.

Physical examination: Head, negative. Eyes, react slightly. Nose, no obstruction. Throat, somewhat injected; tongue protrudes in midline and has a heavy light brown coat. Teeth, fair. Chest, heart and lungs negative. Abdomen, negative except for areas of parasthesia. Knee jerks normal on entrance.

Local: Marked tenderness over upper dorsal spine. Forearms and hands feel numb, pins and needles sensation. Right grip stronger than left. Sensation better over right neck than left. Better over right abdomen than left. Patient can move both arms and both legs. Right arm cannot be moved as accurately as left. Patient lies in a rather dazed condition, breathing rather loudly. Keeps

*Read before the Providence Medical Association April 24, 1922.

his eyes continuously closed and it is difficult for him to open them.

Progress: February 27, 1922. Patient acutely ill, seems dazed, breathes deeply; neck swollen, moves arms awkwardly, strength in hands unequal, speech seems thick, keeps eyes closed, and is annoyed when the lids are raised; is restless. Patient made comfortable for the night and X-ray pictures were ordered and taken in the morning with the following interpretation.

February 28. Examination of the dorsal and lumbar spine; also the cervical spine.

There is evidence of slight displacement of the third and fourth dorsal vertebrae. The spinous process of the third vertebra is out of alignment.

These findings are suggestive of fracture.

Further examination is desirable. Films of the cervical spine should also be taken.

Next day, patient began to show signs of nerve irritation, having involuntary movements of both arms and patient kept continually scratching and picking at his shoulders and upper arms; any attempt to move the head caused great pain. Examination of the reflexes showed them all to be hyperactive. Patient also had marked incontinence, both urinary and fecal, the first few days in the hospital.

Three days after entrance the left side of patient's neck began to swell, a hard swelling, and it was thought that it was a leakage of spinal fluid or blood. Patient's condition was very precarious and given up as hopeless. Portable X-ray pictures were taken and an attempt made to put neck on extension in order to relieve patient if possible.

March 2. X-rays of vertebral column show displacement of the third and fourth dorsal, and dislocation of fourth and fifth cervical vertebrae, fifth being displaced backward. The sixth cervical is crushed in upper portion. Urine shows a trace of albumen. Temperature subnormal, pulse full and bounding. Condition remains about the same. Moved to special room. Head of bed elevated and traction put on head by Dr. Cooke and Orthopedic Department. Seen by Neurological Department. Condition regarded as dangerous either with or without operation. Next morning patient was taken to the operating room and dislocation was reduced by Dr. Danforth and Cooke.

OPERATION.

Head of patient extended in straight line. Head then flexed sharply to left side, then rotated to right side. Vertebra then heard and felt to snap into place. Patient was then taken to X-ray on the Albee table and pictures taken and then a plaster cast was applied from top of his head to his hips.

March 3. Examination of the cervical spine showing fracture and dislocation in the region of the fourth and fifth cervical vertebrae after reduction. The position of the bone is markedly improved. The upper portion of the body of the fifth cervical vertebra is displaced slightly backward. The interspace between the fourth and fifth vertebrae is narrower than normal.

Following this procedure, patient did not seem to get any better and after further investigation it was found that patient had been seen by other physicians before the accident and that they were treating him for nephritis. Blood pressure was immediately taken and was found to be 230 Systolic and 140 Diastolic. Blood chemistry examination showed the following: Sugar, 18%; Van Slyke, 34%; creatinin, 10.4 mgm. per 100 c. c.; urea nitrogen, 78 mgm. per 100 c. c.

Next day 8 ounces blood withdrawn and 250 c. c. glucose given intravenously.

Patient seemed to be getting steadily worse and the Neurological Department and Ophthalmological Department asked to see patient and they rendered the following report:

March 4. Long history of nephritis with hypertension. Cord injury now.

(1.) Cord injury—power in legs is preserved and skin of legs sensitive to pain. For more delicate skin tests, patient is sluggish mentally and is not co-operative. Spinal fluid drainage probably of blood serum and spinal fluid might relieve some pressure on cord. Phrenic preserved probably, patient is incontinent, but has had bed wetting for some time.

(2.) Pupils are about equal. No evidence of pressure in cervical sympathetic excepting right lid lag.

The blood pressure is high, the red renal moderately low and trace of albumen in urine.

O. D. Disc is pale and outline blurred. Throughout the retina there are small hemorrhagic areas

and small areas of atrophy, one near macula as large as one-half disc. Finer vessels are tortuous and arterial contour of larger vessels is inconstant in many places.

O. S. Disc is pale and outline blurred, slight swelling of inferior border and below this area vessels are broken. Arterial accidents of recent origin and areas of atrophy of arterial origin of longer duration in this eye also—below macula there is a rather large area.

Opinion: Arterial sclerosis of long standing with many old and recent arterial accidents in retina. Recent hemorrhages and blurring of discs, mental signs and blood pressure in the absence of more evidence of cord injury make me believe that he has a cerebral oedema accompanying his old vascular condition brought to a head by accident and operation.

On March 5, 1922, another examination of the blood gave the following result: Van Slyke, 26%; 121 mgm. sugar; 11.4 mgm. Creatinine; 108. mgm. urea nitrogen; 207. mgm. N. P. N. Eight ounces of blood withdrawn and 250 c.c. glucose given with no ill effect.

Patient was very irrational and restless, seems to be in state of stupor. There is now marked swelling about right side of the face and generally condition is worse. Blood pressure at this time is 210 systolic and 80 diastolic. Seen by the Medical Service and chloral hydrate ordered to get patient quiet. Patient is not taking any nourishment, liquids have to be practically forced into him. Bowels are kept constantly open and high colon irrigations given every six hours.

March 8. Eight ounces more blood removed and glucose given intravenously, no ill effect following same.

Examination of blood still shows a marked retention of nitrogenous material.

March 8, 1922. Blood: 36 V.%, Van Slyke, 122 mgr. sugar per 100 c. c. of blood; 163 mgr. urea N. per 100 c. c. of blood; 11.4 mgr. creatinine per 100 c. c. of blood; 266 mgr. N. P. N. per 100 c. c. of blood.

March 9, 1922. Patient in a semi-comatose condition at all times, had three marked convulsions today and blood pressure is now at 180 systolic and 100 diastolic.

March 10, 1922. Condition very poor today and it is only a question of hours as to his end. Two

convulsions today but not as marked as on previous occasion.

March 11. Temperature subnormal, respirations have fallen to as low as 12 per minute. Bowels moved. Patient is very restless, seems to have lack of control of movements. Is irrational, and seems to be semi-comatose at times. Had two convulsions. Is still incontinent. Breath smells markedly of acetone.

From this time on, patient grew worse and had several convulsions up to time of his death.

March 14. Blood pressure lower. Condition worse. More irrational. Blood chemistry shows an increase in nitrogenous blood products. Respirations increasing slightly in rate.

Blood examination day before his death showed the following:

March 14, 1922. Blood: 12.6 mgr. creatinine per 100 c. c. of blood; 216 mgr. urea N. per 100 c. c. of blood.

Early next morning, patient had a very violent convulsion and died, 16 days after admission to the hospital.

Death was attributed not to the injury in the cervical region, but to an acute exacerbation of a chronic nephritis and the ultimate uremia.

Case discussed by Dr. Charles O. Cooke, Dr. Charles McDonald, Dr. Berry.

SOCIETY MEETINGS

RHODE ISLAND MEDICO-LEGAL SOCIETY.

Regular annual meeting of the R. I. Medico-Legal Society was held at Slocum's Pawtuxet Cove House, Thursday, June 29, at 5 P. M., President Roswell S. Wilcox in the chair.

No papers were read, and after the reports of officers the annual election was held and the following officers were elected: President, James P. Littlefield; Vice-President, Harry S. Flynn, M.D.; Secretary-Treasurer, Jacob S. Kelley, M.D.

The meeting showed the best attendance for several years.

After adjournment a shore dinner was served.
H. S. FLYNN, *Secretary*.

WASHINGTON COUNTY MEDICAL SOCIETY.

Quarterly meeting was held at "The Hummocks," Wickford, Thursday, July 13, at 11:45 A. M.

Dr. Lucius C. Kingman of Providence spoke on the subject, "Gall-Bladder Disease."

W. A. HILLARD, M.D., *Secretary.*

BOOK REVIEW

"THE PLACE OF VERSION IN OBSTETRICS."

By IRVING W. POTTER, M.D., F.A.C.S.

Cloth, 138 pp. C. V. Mosby Co., St. Louis.

This book has been written with the intention of urging the employment of internal podalic version, according to the method evolved by the author.

The first chapter deals exhaustively with the early history of version, referring to and giving quotations from the writings of the fathers in medicine, from Hippocrates to William Hunter, i. e., to the opening of the nineteenth century. This chapter bears evidence of wide reading and research, and incidentally to an unusual access on the part of the author to the works of the early writers. It is by far the best epitomé of the writings of the first obstetrical authors which we have seen.

The second and third chapters recount the practice as regards version, of the nineteenth century, and of the present time, respectively, and are resumé of the opinions of the various teachers of the time.

The remainder—about one-half of the book—is devoted to the indications for and the method of version advocated by Potter.

He recommends version in all cases, no matter where the head may be. His argument is that maternal morbidity and mortality are lessened, that the maternal soft parts suffer less damage, that the second stage, with its long drawn out period of pain, is abolished, that the fetal mortality is in no wise increased, and finally that the method works a great saving of time and strength for the attending obstetrician.

This pronouncement from Potter, made about five years ago, has created much discussion and not a little opposition, but Potter is a good fighter, and opposition has only made him stronger in the courage of his conviction. Surely a man who performs over a thousand versions per year, as Potter has done for several years past, is entitled to a

respectful hearing, and his opinions should have much weight.

With regard to the technique, he takes up the various steps of the procedure, seriatim, describing them at length, and illustrating them by a series of photographs of the operation, each photograph reproduced also in a schematic drawing. This form of illustration is new, and adds greatly to the value of the book.

It seems to the reviewer hardly fair to author or publisher to enlarge upon the narration of the technique. Suffice it to say that the book is of much interest, as introducing something really new in obstetrics, and should be read by everyone having especial interest in that branch of medicine. Whether or not the reader agrees with the author in all particulars, he cannot fail to improve his own method of version by studying that of Potter.

The work is written in an excellent literary style and flashes of humor now and then introduced add to the pleasure of the reader.

ETHER AND LAVENDER

MEDICAL PRACTICE UNDER THE LAW.

By WM. R. WHITE, M.D.

The Caller Speaks.

"Are you the Doctor? How d'ye do?
May I have just a word with you?
In half a minute I'll explain
Just why it was to you I came.

Now, Doctor, I have had a cold,
In fact, it's now some three weeks old.
I've tried my best to shake it off
But still I have to sneeze and cough.

I've taken quite a lot of things
But nothing satisfaction brings,
So while I try to keep along,
I do not feel so very strong.

It seems to me I've had enough
Of medicine and all such stuff.
I'm sure 'twill help me if I take
A drop to gently stimulate,

And give me stronger appetite
To brace me up this cold to fight.
I'm sure the sense of this you'll see
And on the whole concur with me.

A friend of mine with whom I live
Said he felt pretty sure you'd give
'Prescription,' that's the name, said he.
If so, you'll greatly favor me."

The Doctor Speaks.

"Young man, while I well know it's true
That I've no time to waste on you,
And that most nervy, also bold,
Are you to talk about a cold.

Please do not think me quite so thick
As to believe you're one bit sick.
Nor am I really quite a dunce,
For since you came you've not coughed once.

Just naturally, I must suppose,
You've quite forgot to blow your nose.
What's wrong with you, at very worst,
Is only tantalizing thirst.

And why you're here to me is clear,
Forbidden sale of lager beer,
The which if you could cheaply buy,
You'd never get so beastly dry.

Yet son, to me you do appeal,
For I know well just how you feel.
Hence I believe it's legal quite,
That I for you prescription write.

I'll write for whiskey ounces four,
A quarter pint, no darn drop more.
Drink all of it, just gulp it down,
'Twill help that thirst of yours to drown.

For fourteen hours you'll stay in bed,
To then get up with awful head.
But never mind how great your pain,
Don't ever come to me again.

It's evident you really think
You need what once was called 'a drink.'
It's best for you to change your mind
And on the water wagon climb.

If this advice you take from me,
A better man you'll surely be.
Remember, you have no disease.
Take that door out; two dollars, please."

ABSTRACT

CONGENITAL DISLOCATION OF THE HIP.

Henry Bascom Thomas, Chicago, reviews his results in the treatment of dislocated hips. In all, there were forty-four cases and fifty-six hips. Twenty of these cases, or twenty-six hips—the condition being bilateral in six cases—were those of patients six years of age or older. In this series, eighteen operations were done. Reduction was effected in five cases, in one of which the dislocation was bilateral. One hip was redislocated because of the development of trophic changes. Eleven hips (seven cases) were not treated because the prognosis was too unfavorable. One hip remained out, as attempts at manual reduction failed and the open method was not tried because the muscles were too tense. One hip is marginal. In another case the result is questionable. The results in seven cases are not yet known. In none of these cases was the machine or reducing table used. There were twenty-four cases of patients under six years of age. In six of these the dislocation was bilateral. Therefore, these cases included thirty hips. Forty operations were performed. Fifteen hips were reduced with a fair to good anatomic result and good function. The parents were pleased. Three hips remained unreduced and the patients did not return after release from the cast. In two cases the dislocation recurred. One of these patients has a fairly good function. In two cases the result is questionable. The results in six cases are not yet known because only the index card was found. In one case of bilateral dislocation the anatomic results are perfect and function is good, but the patient limps slightly when fatigued. The five cases in which the hip is still out, the two cases in which it is marginal, and the two cases in which the results are questionable should not be regarded as failures, perhaps, because as the patients are still under six years of age, the prospect of a successful result in another attempt at reduction is at least fair.

It is urged that all those who have had experience in the treatment of congenital dislocation of the hip make a detailed report, thus aiding in establishing standards of management which cannot fail to improve our results.—*Journal A. M. A.*, February 4, 1922.

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ORIGINAL ARTICLES

GLAUCOMA, ITS ETIOLOGY AND TREATMENT.*

FRANK J. McCABE, M.D.
PROVIDENCE, R. I.

The word glaucoma is derived from the Greek, *glaukos*—which means sea-green, and was applied by Hippocrates to all opacities, situated behind the pupil. After a while it was confined to those which presented a green appearance.

By some, the seat of the affection was thought to be in the vitreous humor, by others, in the retina and optic nerve. At a later period, it was thought that glaucoma was due to a peculiar inflammation of the choroid, which occurred most frequently in gouty persons, hence it was termed *arthritic ophthalmia*.

Weller gave a most excellent description of the symptoms of glaucoma, including in it many of the principal and most important points, i. e., the intermittent course of the disease, the sluggishness and dilatation of the pupil, the circumorbital pain, the halo about the candle light, etc. He also made mention of the increased tension of the eye-ball, but it was Mackenzie, in 1830, who first pointed out the importance of this latter sign.

In 1851, Helmholtz invented the ophthalmoscope, which has proved of such incalculable value in diagnosing intra-ocular disease. The first results of ophthalmoscopic examination in cases of glaucoma were negative. It was not long, however, before it was ascertained that there always exists a peculiar change in the optic disc in cases of well marked glaucoma.

In 1854, Jager gave an excellent illustration of the ophthalmoscopic appearances of the optic nerve, in cases of glaucoma, showing the peculiar displacement of the vessels at the edge of the disc. It was, however, reserved for the great genius of Von Graefe to unite these various and disjointed links of the chain of signs and symptoms presented by glaucoma, and, to weld them into one connected whole. It was he who first observed arte-

rial pulsations at the nerve head, and also the excavation or cupping and recognized their relation to increased tension.

Different types or stages of the disease were recognized in the early days, and referred to as acute, subacute and chronic inflammatory glaucoma. When the disease had run its course, and all, even quantitative perception of light was lost, Von Graefe called it "*glaucoma consummatum* or *absolutum*."

Glaucoma simplex was for a long time considered as distinct from glaucoma, with which it was supposed to have nothing in common, except the excavation of the optic nerve, and was originally described by Von Graefe under the title of "*Anaurosis with excavation of the optic nerve*." Donders first described and used the term, *glaucoma simplex*. *Buphthalmas* or *hydrophthalmus* was also called *kerato-globus* and *hydrops* of the anterior chamber. One of the first and most important descriptions of this disease was given in 1869 by Muralt of Zurich under the title of "*Hydrophthalmus congenitus*."

The theories advanced for the cause of the glaucomatous process have been many and varied. While the authorities are agreed that increased intra-ocular tension is the immediate cause, the etiology of the change in tension has occupied the attention and serious study of many master minds, and it is still the great enigma of ophthalmology.

The older theories of glaucoma tried to explain the elevation of tension by attributing it to an increase in the volume of the eyeball due to an increase of the inflow. Von Graefe assumed the existence of an increased excretion of fluid by the vessels* of the choroid as a result of inflammation. Donders ascribed the increased secretion on the part of the choroid to the influence of the ciliary nerves, or as a sort of neurosis of secretion.

Stellwag thought that the increase of tension was not due to increased excretion of fluid, but directly to the increase of blood pressure in the vessels of the interior of the eye. Against these theories the objection must be raised primarily that an increase in the inflow or an over-distention of the vessels cannot by themselves account

*Read before the R. I. Ophthalmological and Otological Society at its February meeting, 1922.

for the elevation in tension, since if otherwise normal, an increase in the contents of the eyeball is immediately compensated for by an increased out-flow.

Knies was the first to show that the peripheral adhesions of the iris, which already had been known to exist, occurred regularly in glaucomatous eyes and he brought it into causal relation to glaucoma. He explained the adhesion itself as being due to an adhesive inflammation in the vicinity of the sinus of the chamber. But almost simultaneously, Weber, having examined a recent case of glaucoma, proved that the cause of the obliteration of the sinus was not inflammation but the pushing forward of the iris by the swollen ciliary processes.

Priestly Smith then demonstrated that glaucomatous eyes are, on the average, smaller than normal eyes and have comparatively large lenses. Czernak it was who showed how the thickening of the iris acts simultaneously with dilatation of the pupil. He explained that it is not the coat of the iris that is pushed against the cornea, because the coat of the iris is very thin. But directly, to the inner side, the iris attains its full thickness, so that here its anterior surface turns up and passes abruptly forward; and it is this point which first comes in contact with the posterior surface of the cornea, when the iris is thickened. In this way, the sinus is closed off, so as to form a ring shaped space which no longer communicates with the anterior chamber. Then, in both the anterior and posterior chambers, the pressure rises and forces the most peripheral or root-portion of the iris against the sclera.

The return to normal conditions, such as occurs in the case of the prodromal attacks, Czernak accounts for upon the supposition that owing to the increase of tension, a state of irritation develops which by reflex action causes contraction of the pupil, so that the iris is again drawn away from the cornea. But, in order for this to take place, it is necessary that the sphincter pupillae should be strong enough and, moreover, no adhesion must have formed between the iris and the cornea.

Animal experiments have proved the importance of the occlusion of the sinus of the anterior chamber in the productions of an increase of the intraocular tension. Furthermore, Leber and Bentzen investigated the filtration capacity of

enucleated glaucomatous eyes and found that this capacity was greatly reduced, showing that the occlusion of Fontana's space may cause increase of tension.

Still other ways of occluding the outlet have been thought of. Some ophthalmologists believe that obstruction to the outflow from the vitreous along the central vessels of the optic nerve may cause an engorgement of the intraocular fluid. Laquer thinks that such an obstruction would be harmless, as long as the anterior filtration space was open. Others have agreed with Schwalbe that the space between the choroid and the sclera is a lymph sac, the distention of which may explain the symptoms of glaucoma.

The prevalent view today, following Leber's teaching, is to consider the canal as a closed venous sinus similar in nature to the sinuses of the dura mater, but in 1909 Dr. Uribe Troncoso claimed, as a result of experiments on the filtration of fluids out of the eyes, that the Schlemm canal was a lymphatic vessel. In a second paper in 1914, this view was supported by new physiological researches. The anatomy of the angle and especially its vascular supply and the connections of Schlemm's canal with the venous plexus were reported in an important monograph by L. Maggiore of Rome in 1917. He described a new intrascleral venous plexus near the edge of the cornea and settled the question of the shape and calibre of the small tubes connecting the canal with the venous branches. These he called "collectors" and considered them as mere fissures between the scleral fibres, formed only by an endothelial lining and with virtual lumen. Being inserted obliquely to the canal, they really act as valves, preventing the blood from the venous plexus entering the canal when the general blood pressure is normal. When this is increased, the blood corpuscles can force the barrier made by the "collectors" and fill the canal. He stated that Schlemm's canal has not the structure of a vein, for there is no question of a proper wall, being only a closed plexus formed into spaces excavated in the sclera, lined by endothelium.

In 1907, Trautman undertook the ophthalmoscopic examination of the irido-corneal angle, but to Saltzman belongs the credit for having perfected this method by the use of a contact glass placed on the cornea, making the accurate observation of normal eyes easy. After numerous examinations, he

declared the canal to be filled with a clear fluid and not with blood, as Leber had asserted. It was only in marked hyperemia of the anterior segment or in pathological conditions that Saltzmann was able to see a reddish ring around the sclera; even then, the color was not indicative of pure blood, but only of a diluted liquid.

Koepppe, using the Nernst-Gullstrand slit lamp and a new Zeiss stereoscopic instrument, for direct examination, was able to see the angle with high magnifications in normal and pathological eyes. He also found Schlemm's canal to contain a clear liquid.

According to some authorities, these demonstrations settle the physiological problems, and they assert that, henceforth, Schlemm's canal must be considered as a lymphatic plexus containing almost pure aqueous humor.

Some hold that the retention is due to the chemical alteration of the intraocular fluid, which causes an irritation of the endothelium lining the outlet passages, which proliferate and cause occlusion.

Another theory is one in which the elasticity of the capsule of the eyeball is considered the primary cause of glaucoma. It has been proven that the normal eye can accommodate itself to an increase in the volume of its contents, and that the capsule of the eye stretches considerably without any increase of tension, therefore, it is obvious that the sclera has lost its elasticity in a senile eye that has been attacked by glaucoma.

Many investigators, like Straub, Nicolai and Vennemann, believe that it is not the loss of elasticity of the sclera, but of the choroid that is accountable for the rise of the intraocular tension. They state that it is not the sclera, but the choroid, that has to bear the pressure of the vitreous and to disburden the venal vorticosae; if the choroid loses its elasticity, the pressure acts upon the veins and produces an engorgement in them.

The above is a partial list of the theories put forth by the greatest minds known to ophthalmology, and after exhaustive research.

You will all agree with me, I am sure, that all of them cannot be correct. It is a fact that no one of them has been accepted as a satisfactory explanation of all the different phases found in the glaucomatous eye.

Roemer, when asked his view of the etiology of glaucoma, said that in his opinion, a universal ex-

planation of the varying pictures of glaucoma is not possible. In general, he said, "I think that the change in the capsule of the globe, which has hitherto been held in much too slight estimation, is the primary cause and furnishes the predisposition to glaucoma. The change in the sclera has been so little appreciated only because it is so slightly prominent clinically and anatomically, yet changes, such as the loss of elasticity, have gradually taken place in the course of life, which predispose to the clinically recognizable outbreak of glaucoma. Prolonged increased tension can cause mechanically, excavation and injury of the optic nerve. Therefore, without underestimating the importance played by the occlusion of the sinus of the anterior chamber, and the increase of the intraocular excretion of fluid, I believe that in primary glaucoma the increase of the intraocular fluid, the occlusion of the sinus of the anterior chamber and the rise of the intraocular tension, are secondary symptoms. The primary change in glaucoma and the predisposing conditions for its clinical symptoms are to be sought, I think, in the capsule of the eyeball. If changes have taken place in the sclera, near the sinus of the anterior chamber, a condition is produced which paves the way for an occlusion, in case of an increase of the intraocular fluid. If the change in the sclera extends to loss of elasticity of the lamina cribrosa, it is evident that the disease of the optic nerve must be considered an integral part of the disease glaucoma. If the loss of elasticity of the lamina cribrosa is especially marked, it can be understood how the excavation can be caused by the increased tension.

Only when we consider glaucoma to be a disease, per se, which is perhaps caused by a degeneration of the capsule of the eyeball, and consider the intraocular tension, the increased secretion of fluid and the occlusion of the sinus of the anterior chamber to be only secondary symptoms can it be understood how we can influence somewhat the mechanical factors of the change of fluid by our therapeutic measures, but not often to be able to cure the disease as such."

At first the treatment for glaucoma was mercurials, antiphlogistics, diuretics, diaphoretics and mydriatics. Von Graefe was the first to tap the anterior chamber, which gave only temporary relief. He next tried iridectomy for glaucoma in 1856, having found that it had proved of benefit in

ulcerations and infiltration of the cornea, by diminishing the tension. Soon he found that this procedure not only caused a permanent decrease in tension but that it might be regarded as a true curative agent in the treatment of the glaucomatous process in a large percentage of cases. Since that time, iridectomy has been recognized by most of the eminent oculists of Europe, as the most reliable therapeutic agent in the relief of this dreadful disease.

In 1872, De Wecker introduced his trephine, for use, as he said, in cases of absolute glaucoma in which a satisfactory iridectomy cannot be made on account of marked atrophy of the iris and a sclerotomy would not suffice. This procedure has been perfected in the present Elliott trephine operation.

A number of other operative procedures have been recommended, such as cyclodialysis, sclerotomy, peripheral iridotomy, iridotaxis, etc., all having for their object the restoration of drainage of anterior and posterior chambers by the formation of a filtering scar.

The so-called conservative treatment of glaucoma is by use of meiotics, eserine and pilocarpine. The value of meiotics was pointed out by Lazner and Weber in 1876.

The important question, then, is "How shall we treat our glaucoma patients?" or to operate or not to operate,—that is the question.

Some authorities maintain that not only do meiotics arrest the glaucoma and act as adjuvants to the operative treatment, but they as such should supplant operative measures because they are actual remedies for the disease. This view, held by Pflueger, Cohn, Schleich, Koenigshoefer and Bjerram, has led many ophthalmologists to regard operation as a last resort.

Others hold a diametrically opposite view—that valuable time is wasted with meiotics and that vain hopes of a cure without operation are held out to patients.

It is fair to state that neither the operative nor the conservative treatment can cure glaucoma, in the true sense of the word. The problem of its cure is by no means solved. In our effort to combat the disease we must use both methods. The conditions, as presented, impose upon us the se-

rious duty of considering well whether or not we can best serve the patient's interests by the conservative or operative method.

Schleich noted in his cases of glaucoma simplex an advance in 61% and an arrest of the condition in 39%, following operative treatment. Fuchs states that in both glaucoma simplex and inflammatory glaucoma the earlier the operative interference, the better the results in glaucoma simplex. After periods ranging between five and ten years, under observation after operation, he thinks about half his cases remained as before operation. In general, he advises early operation. He states that the success of an operation, as regards vision, can be estimated approximately beforehand, if account is taken of what morbid changes can and what cannot be removed by the operation. Iridectomy reduces the intraocular tension. By it, the glaucomatous cloudiness of the cornea and the disturbance of vision produced by it, as well as the disturbance of vision caused by the compression of the retinal vessels, are removed. But the excavation and the atrophy of the optic nerve fibres associated with it, either do not abate at all, or do so in but very slight degree, so that the disturbance of sight, as far as it is dependent upon them, persists.

Favorable as is the result of operative treatment in many cases, the fact must not be concealed that too often the process is not arrested, in fact, sometimes after an apparently successful operation, the vision rapidly grows worse and blindness supervenes at a rapid rate.

In conclusion, I would say that no satisfying explanation has appeared for the etiology of glaucoma.

We should consider each glaucomatous patient as an individual, study his condition carefully, regulate his living from hygienic standpoint. His vision, tension, visual fields, blind spot and appearance of the nerve head should be carefully noted.

In glaucoma simplex, with little or no increased tension and fields and vision changing but slowly, I feel that conservative treatment would be the choice.

In the inflammatory type, the sooner the operation the better, in my opinion.

THE TREATMENT OF CHRONIC RHEUMATISM WITH ESPECIAL REFERENCE TO RADIUM.

BY L. L. ALBERT, M.D.

CENTRAL FALLS, R. I.

The treatment of chronic arthritis has long been the subject of investigation and study by our profession, but until recently the results of these pursuits have not been such as to give any definite method of treatment with assurance of positive relief. Chronic arthritis develops not only because of long continued bacterial infections but also from metabolic disturbances, gastro-intestinal derangements, exposure, diseased teeth, tonsils and many other causes too numerous to mention.

From my observation in the treatment of a great number of cases, I must coincide with those who aver that it is more common in the laboring class, who are exposed to the elements, than to those who lead a sedentary life.

But rheumatism, however, makes no distinction between classes. In most cases the development of the disease is gradual, either by acute exacerbations or gradual progression. The blood stream carries to the joints chemical products of bacterial growth, products that have sprung into being from bacterial action in the intestinal tract, tonsils, teeth, tubes, gall-bladder, and other parts of the human structure.

In the treatment of the disease the main problem is to find a means for the system to eliminate the systemic infection. The etiological factor must be sought and removed, if possible. Occasionally our attention is called to remarkable cures effected by enucleation of the tonsils or removal of abscessed teeth or drainage of the gall-bladder, but comparatively speaking, these cases are rare.

The usual case is one where the patient suffers for years and attempts to effect a cure by shifting from one physician to another, oftentimes resorting to patent or proprietary remedies, by having recourse to electrical treatment or massage, and even to the chiropractor and osteopath, in the hope of being able to throw off this painful ailment. Palliatives affording him temporary relief arouse in the patient hope that he is free from his affliction, only to find in a short while that his system is racked more painfully than before.

Since 1913, serums, sensitized bacteriums and vaccines, both autogenous and stock, have won great favor in the profession. As a result of these

serums and vaccines, in many cases, permanent cures have been effected in some instances, and in practically every case marked relief has been felt by the patient. More recently, injections of sterile milk, non-specific proteins, peptone solutions, typhoid bacilli, or any high protein solution have been used with varying success.

The old method of treatment by restriction of food through diet, in cases of chronic rheumatism especially, and limitation in the use of red meats is being gradually superseded by permission to the patient to enjoy a liberal diet.

As a result of my experience in the treatment of these cases, I wish to call especial attention to the newer, and in my opinion, more reliable treatment than any heretofore used—and that is, injections of radium in solutions in different strengths. After using different concentrations in different patients, and even in the same patient, my experience has been that .25 milligrams of radium dissolved in two cubic centimeters of sterile salt solution gives the best result. The injection is given intravenously in the same manner as any drug is injected into the vein. Of course, cleanliness, care and slowness are essential. If a vein cannot be located, the results in injecting deeply into the muscle apparently are the same, but the reaction is not so prompt nor so severe as in the case of an intravenous injection. After the injection, usually within six to ten hours, the patient feels a general malaise with a marked increase of pain in the affected joints for a varying number of days, from two to ten usually. As soon as the reaction subsides, a general improvement is noted in all the joints. There is less pain, greater motion and a freer usage of the affected joints. My experience has taught me that the greater the reaction, the better is the result. The dosage of radium should be given large enough to cause a reaction lasting about eight days, and should be repeated about every two weeks.

I have been using vaccines and proteins for almost ten years, but the results that I have obtained in very obstinate cases with radium have been far more marked and more successful than any cases I have treated with vaccines and proteins. So pronounced have been the results obtained from the use of radium in the therapy of chronic articular rheumatism that I feel certain that a new and wide field of research has been opened to our profession in the use of this substance, and what the future will show as a result of experimentation with radium is indeed beyond our conception.

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We have before announced and we again reiterate that every effort is made by our advertising management to know that our advertisements are of ethical character and represent the best in their especial line of merchandise; for obvious reasons we must decline, however, to entertain any suggestion of editorial comment or praise of various commodities that are advertised in our pages, however worthy they may be of commendation.

We are well aware that these materials ap-

pearing in our columns are of first quality, otherwise we could not seek or accept these advertising contracts, but to treat one or a few editorially, and neglect or ignore others, appeals to us as being neither just nor proper. The other alternative would cause such elongated editorial eulogies that no space would be available for other literary effort, and notwithstanding the somewhat persistent attitude of some of our prospective advertisers, may we be permitted to say that the fixed policy of this JOURNAL, both in regard to reading matter furnished and editorial attention, may not be disturbed?

POLIOMYELITIS.

The lack of definite information as to the mode of transmission of poliomyelitis and the alarming increase in the incidence of the disease that has taken place in the past thirty-five years are matters of great importance to the general practitioner of medicine. Studies as to the etiological factor, methods of attempting its cultivation and the like, must fall to the lot of laboratory investigators, but the field work, the identification of cases and to some extent the collection of data bearing on the origin of these cases must be done by the man in active practice. At a time like the present, when the disease is necessarily in the minds of all the medical men of Rhode Island, mild and non-paralyzed cases are much less likely to be missed than at times when the disease is less prevalent. Nevertheless, even now, instances are occurring in which mild or moderately mild febrile attacks of an indefinite nature are allowed to escape suspicion and later on are proved to have been poliomyelitis by the discovery of a slight but definite muscular paralysis. Such cases must be dangerous to the community.

The doctors of the State can be of the greatest service to the health authorities by endeavoring to identify or bring under suspicion all mild and early cases, by insisting upon careful, complete examination, with lumbar puncture and examination of the spinal fluid where the symptoms render a diagnosis of poliomyelitis at all probable; and, furthermore, by obtaining all the information possible relating to illness among playmates, journeys to other communities and the like—in fact, any information that may be of value to the health authorities in their epidemiological studies of this disease.

THE VOLSTEAD ACT IN RELATION TO PHYSICIANS.

For sometime it has been apparent that the Volstead Act was working a hardship upon the conscientious physician and his patients. In many instances it has been impossible legally to prescribe sufficient liquor for internal medication or grain alcohol for use on certain sensitive skins, and this has been a serious drawback in the Act. While there are various opinions as to the wisdom of a prohibition law, there can be but one opinion regarding the right of physicians to prescribe alcohol when in their opinion it is necessary. The present

feeling toward the prohibition law is in no way helped by the regulations of the Treasury Department concerning the working of this act as it applies to physicians, and we are gratified that the House of Delegates of the American Medical Society has unanimously voted to request the Treasury Department to relax restrictions on prescribing by physicians. There is no reasonable doubt that a physician is the individual who is qualified to pass upon the needs of a patient for alcohol and we believe that no one is wise enough to say that alcohol is not needed by some persons at certain critical times in their lives. In our experience it has been impossible legally to obtain sufficient grain alcohol for use in certain old people confined to bed whose skins were irritated by medicated alcohol. We believe that the time has come when the medical profession should rise up and demand its rights in this very important matter.

VALUE OF PREVENTIVE MEDICINE.

In a recent number of the Weekly Bulletin of the Department of Health of New York City, is a brief review of the accomplishments of the Department during the fifty-four years of its existence. During this period the death rate has dropped from 28 to 11 per 1,000, which means that 100,000 lives were saved last year and 1,000,000 cases of illness prevented if the death rate existing at the time of the foundation of the Department had persisted. In thirty years the death rate of children under five years of age has fallen from 97 to 24 per 1,000, and of infants under one year from 241 to 71 per 1,000. Whereas in 1870 the death rate from malaria was 27 per 1,000, fatal cases of malaria now rarely occur and are usually imported. The city formerly was visited by epidemics of smallpox and in 1872 119 per 100,000 died of this disease. Yet in 1921 there were only 29 cases in the city and no death has occurred in nine years. In 1870, 40 persons of each 100,000 died of typhoid fever, while in 1921 only two died. In 1871, the death rate from tuberculosis, which was 406 per 100,000, has been reduced to 89, a saving of 18,207 lives had the former rate prevailed. Many other diseases have also shown marked decrease. Scarlet fever, from 100 to 5 per 100,000; measles, 62 to 3; whooping cough from 47 to 7; diphtheria from 295 per 100,000 in 1875 to 18 per 100,000 in 1921.

These statistics bespeak the remarkable improvement in health conditions in New York City during the last half century. It is the more remarkable that the death rate should be one of the lowest of any city in the world when one considers that New York is the gateway through which the majority of immigrants enter this country, and that its millions of heterogeneous peoples from many countries have brought with them habits inferior to those of the native population and that they are living under such crowded conditions.

The Health Department of New York City can well be proud of the record. It has been invested with broad authority in all matters pertaining to health but its record amply convinces that this authority has not been abused.

There are one or two other factors in the production of this low death rate. During the last fifty years there has been tremendous improvement in the ability of physicians graduated from medical schools. The men now turned out are much better equipped to treat illness and have a deeper sense of their responsibility to the public as well as to their individual patients. They thereby have proved to be of very great assistance to the efforts of the Health Department. Then, too, during this same period, the amount of hospital facilities have increased enormously and the excellence of hospital treatment has tremendously improved. Hospitals have been a considerable factor in improved health conditions.

The public itself has also been helping themselves. People are becoming more interested and more intelligent in matters of health. Quacks do not flourish as they formerly did, and physicians themselves are compelled to render a high quality of service because their patients are too well informed to be satisfied with inferior treatment.

The major portion of credit, however, belongs to the Health Department, not only by what its staff actually does but by the dissemination of knowledge about disease, its prevention and treatment. Many physicians cherish antagonism against the Health Department, particularly when the department enters the field of treatment. They feel that bread is being taken out of their mouths. This recent extension of health department work has only been introduced to fill a gap; to furnish

treatment to those who could not or would not go to physicians because of the expense.

The health department desires only to meet this need by giving actual treatment only when necessary, first urging that the people go to their own physicians for such service. Those who criticize would do well to ask how often their patients consult them at the solicitation of the health department. They would be less inclined to find fault when by mistake the department has rendered free treatment where it was not deserved.

The achievements of the New York Health Department should be an inspiration to the whole country. If such results can be accomplished in such a crowded metropolis, what might be expected possible of achievement in smaller cities, towns and country districts?

LETTER TO THE EDITOR.

Editor of the RHODE ISLAND MEDICAL JOURNAL:

Permit me to offer a few suggestions in reference to your editorial "On Medical Expert Testimony," which appeared in your last issue of the JOURNAL. In the first place, I desire to express my entire agreement with you as to the evils attendant upon the practice of each party in an action at law selecting his own experts; but I also desire to state that "professional" experts appointed by the court would quite likely result in bringing such appointments under the influence of party politics, which, in my opinion, would have far more injurious effects than the present practice can be charged with.

The evils of expert testimony are rooted in (a) the hypothetical question, and (b) the ease with which medical practitioners are secured to testify on either side of a case. The hypothetical question is a comparatively modern development in the practice of law and its growth among other things is due to the readiness with which medical men are willing to express an opinion for or against any proposition, and also to the fact that to the lay mind all doctors are alike. The ordinary individual looks no further than the "Dr." or the "M.D." There are no degrees of ability and attainments to him and the lawyer takes advantage of this fact to cloud the issue. The lawyer has no use for the physician who insists upon investigat-

ing the facts for himself, wherever possible, and drawing his own conclusion from the facts as he finds them. If you will pardon the suggestion, but it seems to me that in your reference to psychiatrists you fall to the same error as the laymen. There is a large and increasing number of physicians of the school of psychiatry who refuse to testify on any matter which they cannot or are not permitted to investigate for themselves, and I venture to say that if there are psychiatrists who offer their services to the lawyer as experts and are willing to be "cabined, cribbed and confined" by the hypothetical question, such practitioners do not rank very high in this distinctly specialized branch of medicine.

Your suggestion that "physicians * * * have to take things as they find them," with respect to expert testimony, seems to me to be stating the proposition too broadly. Where the hypothetical question is involved physicians "take things" as the lawyers want to "find them." The medical expert would be in neither "a false" nor a "disagreeable position" if he insisted, wherever possible, on making investigations for himself and refusing to testify unless permitted to do that. Taking the results of the more or less partial investigations of others and giving an opinion thereon necessarily means a difference of opinion which gives full opportunity for partisanship. In one or two classes of cases, perhaps, this is inevitable and they are the very cases in which the hypothetical question gets in its most deadly work to the growing discredit of the medical profession.

A somewhat closer study of this question has led me to lean to the view that the profession, for its own sake, will either have to abolish the practice of giving expert testimony altogether or enter upon a propaganda of education with a view to the enlightenment of the laymen to the fact that doctors are very far from being equal in their attainments and ability and that prefixes and suffixes to names are of very little meaning, in the hope and expectation that perhaps a better and more reliable class of medical experts may be evolved who "shall be men who have the honor and good repute of their profession at heart" and "who are concerned solely with helping courts and juries to arrive at the truth" and not with helping lawyers to win cases, under the forms of law, irrespective of the real merits of the cases.

FREDERIC J. FARNELL, M.D.

MISCELLANEOUS

"OLD TIMES."

"Memory, no less than hope, owes its charm to the far away."

Mr. Editor:

The welcome given in your Lavender Corner to *Reminiscences of Rhode Island* encourages me to offer some recollections of a medical man in Ireland nearly fifty years ago. Entering by Cunard steamship the port of Queenstown, there comes remembrance of the breakfast at the hotel, wonderful mutton chops and fresh rolled, unsalted butter, product of the ever green tender sod of the well-named "Emerald Isle." Before reaching our destination, Rotunda Lying-In Hospital, Dublin, a short trip was taken through the country; Cork, then Blarney Castle, where, being lowered by ropes, the "stone" was duly kissed that we might subsequently have courage to meet the smooth native on more equal terms; on through Limerick to Muckross and the Lakes of Killarney; 'twas there on our way from the station, riding on a jaunting-car over the hills, we came to a cottage, the home of "Kate Kearney, who lives on the banks of Killarney," and here an invitation was accepted to partake of liquid refreshment, goats milk and "potheen," a potent liquid, distilled moonshine, a virgin product never stamped by legal minion, strongly impregnated, however, by the peaty twang, a taste or flavor due to the brew being prepared over a fire of the "auld sod." Then followed a steamboat sail down the beautiful lake among the islands, each with its fascinating legend, "The Devil's Punch-Bowl," "The O'Donoghue Stronghold," etc., etc. Finally returning to the station, we resumed our railroad journey to Dublin.

The Rotunda Lying-In Hospital, having a world-wide reputation, always had its limited accommodation for experience seekers well filled; among the number at that time was a medical practitioner from Brazil, one from Buenos Aires, another from India just finishing army service and brushing up midwifery to resume civil practice again, two from Glasgow, one from Edinburgh, two from London and a number from different sections of Ireland.

The morning after being settled in quarters and reporting for duty, I was requested to attend a call outside that required immediate attention; the pa-

tient, mother of several children, occupied the only bed in a home of two rooms, a kitchen and bedroom. An environment of poverty and squalor but good nature prevailed with no complaint, the only nurse, a neighbor helping. When about to depart, the room was invaded by a group or procession, preceded by the proud father bearing a bottle and a glass, followed by the attendant neighbor carrying in her arms the baby, washed and covered, and others closing in brought up the rear, until the small room was well packed. Then, with a smile and a flourish, the doctor was invited to drink, but at that period, being a teetotaler, this was declined with thanks and never will be forgotten the look of dismay and astonishment that came over those faces and an old woman threw up her hands and exclaimed, "Oh, Doctor, dear, would you spoil the beauty of the babby!" Certainly not. Here was a situation to be met, a custom not lightly to be dealt with; ignorance on my part was not sufficient excuse; was my career as a successful obstetrician to be thus blighted in its early opening—my very first case in that old and honored institution—no! by no means, no! Pardon my seeming indifference, my thoughts were on directions for the well-being of the mother; we drink the health of the wonderful babby, she well may be the most beautiful in this whole block, health and long life to her and to her proud father and dear mother, the same to these kind friends and neighbors, and with the strong liquor burning my throat and nearly strangling, tears came to my eyes, due to the surprising strength of the unusual potation. However, the cause was attributed by an appreciative audience to deep sympathetic feeling for the occasion and the day was saved; the report came later to the hospital that "the doctor was all right." Kind friends, you may believe my lesson was well learned and so embarrassing an occasion did not again occur, for my conduct on subsequent and like ordeals might have challenged any who would dispute my claim to being "a beauty doctor."

G. EDWARD BUXTON.

HOSPITALS

RHODE ISLAND HOSPITAL.

The following promotions have been made in the Rhode Island Hospital:

Dr. Charles F. Gornly to Assistant Visiting Physician; Dr. Walter C. Gordon to Physician, O.P.D.; Dr. John J. Gilbert to Assistant Surgeon, Department of the Ear, Nose and Throat.

The following appointments have been made: Dr. George E. Teehan as Ophthalmological Externe, Dr. William A. Mahoney as Medical Externe, Dr. Parker Mills as Medical Externe, Dr. George W. Waterman as Medical Externe, Dr. Frank H. Ackrill as Dental Externe.

Dr. William H. Magill, a member of our staff, is recuperating after being operated upon at the Royal Victoria Hospital, Montreal, Que. His service has been taken over by Dr. I. H. Noyes, assisted by Dr. J. A. McCann.

The regular quarterly meeting of the Staff Association was held at the Hospital July 10 and the usual business was transacted.

Dr. Niles Westcott, 3rd Assistant Superintendent, is away on vacation and is taking a trip through New York State and Pennsylvania. Dr. Guy W. Wells finished a two-year internship here July 1st and is to take up work as resident physician at the Peter Bent Brigham Hospital on August 1st. Dr. Noble R. Chambers finished a two-year internship here July 1st and expects to take an eight months internship in Neurology at a Philadelphia Hospital.

Drs. Louis Gariepy, Norman B. Muhme, Royal C. Hudson and Wilfred Pickles started internships here July 1st. Dr. Pickles was allowed one month's leave of absence, during which time Dr. Charles Inches has been substituting.

Drs. Carl J. Geiger, John Thomas Burns and John L. Sly, all former internes, have recently visited the Hospital.

NORMAN C. BAKER, M. D.,
2d Asst. Superintendent

CASE REPORT*

CASE OF P. R.

HISTORY: *O. P. D.* Admitted to Neurological Department May 21, 1921. Diagnosis—Compression Myelitis. May 25—Wassermann 4 plus with both antigens. May 21—X-ray of cervical spine.

"The examination of the cervical spine shows definite destruction of the bodies of the 4th and

Read before the Section on Medicine of the Rhode Island Medical Society, April 25, 1922, by Dr. Noble R. Chambers of the R. I. Hospital.

5th cervical vertebrae and of the intervertebral space. There is also some bony proliferation involving the bodies of the 4th, 5th and 6th vertebrae."

DIAGNOSIS: Deferred. Tuberculosis, new growth and injury should be considered. *House.* Admitted June 8, 1921. *Chief Complaint:* Weakness of hands and feet. *Family History:* Mother dead—"shock" at 55. Father died of pneumonia; 3 brothers and 2 sisters whereabouts unknown; two sisters died in infancy. No T. B., neoplasm, or mental trouble made out.

PAST HISTORY: Has no recollection of children's diseases. Primary lesion on lower lip 22 years ago, followed by secondary rach. Given small amount of antileptic treatment, apparently K. I. and mercury. Severe aching pains in bones, particularly legs, 15 years ago. Broke leg at that time. *Head.* No headaches, slight occasional dizziness lasting few minutes, last summer. Eyes, ears, nose, throat negative except throat sore at time of secondaries. *Card. resp.* No dyspnea or palpitation. No edema. *G. I.* Appetite good, no indigestion, bowels always much constipated. *G. U.* For past year 5-6 D, 3-4 N, with slight burning. Slight trouble in starting for past year.

HABITS: For past 25 years has indulged in spree of alcoholism lasting 2-4 weeks at 8 or 9 months intervals. None in meantime. Of late has used considerable "Jakie." Coffee 3-4 cups a day. Tea infrequently. No drugs.

PRESENT ILLNESS: About 16 months ago noticed gradual onset of a sharp pain in back of neck, sometimes extending into shoulders. Worse at night, interfering with sleep, but during day would wear off. Six months ago noticed that right upper arm was weak, but he attributed this and the pain to the dampness of the basement in which he worked. About 5 weeks ago, however, right lower arm and hand became weak so that grip was lost—no loss of sensation noted. A week later the left arm and hand were similarly affected and legs became weak at about the same time—numbness of feet noted at onset but this has since passed off. For past two weeks, following a few days of marked polyuria, has had trouble in starting stream and for past 2-3 days has dribbled. Bowels more constipated than ever, but no incontinence.

PHYSICAL EXAMINATION: Patient is well developed and nourished adult of age lying quietly in bed not acutely ill apparently. *Eyes.* Left pupil

larger than right. *Chest.* Heart not enlarged to percussion, no murmurs, quality fair. Lungs negative. *Extremities.* Feet cold. Otherwise negative. Stiff fingers. *Reflexes.* All tendon reflexes hyperactive. Double ankle clonus. Abnormal plantar reflex but not distinctly Babinski; no Oppenheimer. Knee jerks particularly hyperactive. Sense or direction for touch normal. Disturbed tactile sensation everywhere but face. Says that sharp pointed instrument (pin) feels dull or light and not painful except when pressed fairly heavily.

X-RAY REPORTS: July 8, 1921. Cervical spine. The examination of the spine shows extensive destruction of the body of the first cervical vertebra and to a lesser extent the body of the fifth cervical vertebra with obliteration of the disc between these bones. There is marked kyphos in this region. This process might be due to specific disease. Tuberculosis should also be considered.

August 5, 1921. Cervical Spine. Examination of the cervical spine. The findings are much the same as previously noted. The process appears to be tuberculous.

Aug. 11, 1921. Examination of the upper cervical vertebrae. No abnormality seen. Sept. 28, 1921. Examination of the cervical spine. There is extensive destruction of the fourth and fifth cervical vertebrae and to a lesser extent the sixth cervical vertebra. There is some narrowing of the interspaces between the sixth and seventh vertebrae. There is a marked kyphos. The lesion appears to be somewhat more extensive than in the previous examination. It may be due to tuberculosis or specific disease, but we request views of some of the long bones including the tibiae.

March 23, 1922. Examination of the cervical spine. The appearance is much the same as in previous films. There is nearly complete destruction of the body of the fourth cervical, destruction of a large portion of the body of the fifth, and beginning process on the sixth cervical.

COURSE IN HOSPITAL: Patient still in bed with extension to head by chin strap. Strength of arms still much less than normal but much better as evidenced by grip.

COMPLICATIONS: Cystitis and bed sore. Now recovered from both.

LABORATORY AND TREATMENT REPORTS: Wassermann—July 13, 1921. Negative with acetone. Four plus with cholesterin. Sept. 8, 1921. Four plus with both antigens. Feb. 24, 1922. Four plus

with both antigens. Wassermann (spinal fluid)—June 13, 1921, negative except 4 plus with cholesterin—1 plus with acetone. Spinal Fluid. July 13, 1921. 108 cell count. Alb. trace. Spinal Fluid. Sept. 8, 1921. Negative except four plus with cholesterin—1 plus with acetone. Urine—Negative except at time of cystitis. Temp. and pulse normal except at time of cystitis.

TREATMENT: Patient has had Neosalvarsan and K. I. treatment. Extension applied to correct kyphos and massage.

CONCLUSIONS: 1. Wassermann positive. 2. X-ray shows destruction rather than proliferation, therefore favoring tuberculosis. 3. Patient has improved slightly.

Discussion by Dr. Harvey B. Sanborn.

SYNDROME OF MALIGNANT TUMORS OF THE NASOPHARYNX.

Gordon B. New, Rochester, Minn. (*Jour. A. M. A.*, July 1, 1922), is impressed with the facts that: (1) malignant tumors of the nasopharynx are much more common than has been believed; (2) the syndrome which they present is not generally known, which accounts for many patients being treated medically and surgically without the discovery of the tumor, and (3) there is a striking lack of nasal or nasopharyngeal symptoms in many of these cases. Seventy-nine cases demonstrate that many nasopharyngeal tumors are overlooked. This may be due to the fact that the patients consulted internists, neurologists, general surgeons or ophthalmologists, and an examination of the nose and throat was not made. In most cases, however, the tumor had been overlooked because a careful nasopharyngeal examination had not been made by the laryngologist. The syndrome presented by these tumors is quite typical, and the finding of a small nasopharyngeal tumor will usually clear up the diagnosis in cases in which it had been previously impossible to account for cer-

tain symptoms and findings associated with the head.

BOOK REVIEW

PRINCIPLES OF MEDICAL TREATMENT.

Fifth Revised Edition.

By George Cheever Shattuck, M.D., A.M.; Wm. Leonard, Inc., Boston.

"An attempt to offer clearly and concisely sound principles of treatment," this book summarizes in general, not in detail, methods which have been generally accepted and well tried out. The chapter on nephritis is perhaps the weakest in the book and will hardly satisfy the practitioner who is keeping abreast of modern work on this subject. The section on typhoid fever is particularly good and embodies the essentials of the treatment as carried out by that master of medicine, the author's father, Professor F. C. Shattuck. No reference is made to the use of foreign protein injections in early typhoid. The chapter by Dr. Place is an excellent summary, clear and concise. In dealing with the treatment of diphtheria, however, the discussion of the use of antitoxin seems inadequate. It is dealt within but a few sentences and the reader is referred to the back of the book, where the nature and use of serum antidiphthericum is described and one is surprised to note that no mention of intramuscular injections is made. In Dr. Blake's contribution, the student of clinical influenza will be inclined to criticize the suggestion that acetyl salicylic acid is used freely. Dr. Hawe's chapter on pulmonary tuberculosis is very good but the discussion of etiology and diagnosis is quite out of place. The contribution by Dr. Ragle on diabetes is quite the most satisfactory chapter in the book, being clear, definite and covering in a very few pages most of the important aspects of the subject. The book can be especially recommended to medical students and should be useful as a hand book to the general practitioner.

A. M. B.

ABSTRACTS

BASAL METABOLISM AND IDEAL WEIGHT AND PULSE RATIOS.

More than twenty-five hundred observations on about twelve hundred subjects were made by Anne Peterson and Will Walter, Chicago. Contrary to the usual belief, there is no cause and effect relation between weight and thyroid activity as evidenced by the basal metabolism tests. Weight changes apparently are determined by other endocrines—possibly the anabolic types—rather than by the catabolic group to which the thyroid belongs. The conclusions should serve as a warning against the promiscuous administration of thyroid extracts in subjects who are overweight. Association was noted of low pulse definitely with low metabolism with gradual ascent of curve of rising metabolism with increase in pulse rate, until at 0 of metabolism an average pulse rate of 85 is recorded. After that point is reached, the metabolism shoots up with the increasing rapidity over the pulse rate until runaway pulse is reached, after which it does not change much. A pulse over 82 in men or 90 or over in women in a resting state is cause for suspicion of hyperthyroidism, and a basal metabolism test is indicated for final judgment and is likely to show plus. Several observations have shown that when the pulse rate drops from a high normal in action to a normal or low "basal" rate, the basal metabolism is most likely to show normal or low. The basal metabolism test is necessary for diagnosis and for therapeutic regulation. Its determination by tried out portable apparatus is reliable. The test is best made at the bedside of the subject, and the portable apparatus makes feasible its use in the home when proper technic is employed.—*Jour. A. M. A.*, February 4, 1922.

The following are abstracts of articles in the issue of *The Journal*, May 20, 1922:

TREND OF PRACTICE OF MODERN MEDICINE.

Modern clinical medicine, says Frank Billings, Chicago (*Journal A. M. A.*, May 20, 1922), embraces such a vast field of knowledge that it is beyond the power of any individual to acquire the necessary whole field of medicine. A recognition

of this has led to the necessary specialization in medicine, with the evolution of the internist and of other specialists in the narrower fields of medicine and surgery. The wonderfully beneficial results of the application of asepsis have made the modern general surgeon a specialist. The evolution of medicine and the promotion of specialism have resulted in the invention of instruments of precision and the elaboration of laboratory methods of physical and functional diagnosis which require special technical skill and experience in their application. In consequence, diagnosis, both physical and functional, has become more precise and at the same time complex. Specialization in medicine developed rapidly before the war, and it may be said that the result was generally beneficial to clinical medicine and surgery, and to the public; but an early tendency to overspecialization became evident. In recent years, overspecialization in medicine has led to the organization of private practitioners into groups, with representatives in the membership of general or internal medicine and surgery and of most or all of the specialists of medicine and surgery, including laboratory specialists, for the purpose of affording greater efficiency in practice. Since the end of the war, the movement toward group practice has expanded rapidly. The organization of diagnostic and treatment pay group clinics is a more recent development. The suggested advantages of group practice include more efficient diagnostic and therapeutic service; financial economy to the patient, because the one fee charged for the total service rendered is adjusted to meet, without embarrassment, the financial resources of the patient; and professional co-operation in substitution of the prevailing individualism in medical practice. The value of the application of group practice is limited. Based on long experience in consultation and in general hospital and private practice, it is the author's opinion that a correct anatomic and functional diagnosis can be made in from 80 to 85 per cent. of all the patients of an average community by a qualified, industrious, painstaking general practitioner by the sole application of the trained mind, the special senses, the hand and an always available simple laboratory equipment. Likewise, approximately 80 per cent. of the patients will receive efficient management and treatment as ambulatory or house patients. The truth

is, the splendid knowledge which modern medicine has made available in the diagnosis and treatment of disease is misapplied frequently, with unfortunate derogatory effect on the public and the tendency to demoralize some members of the medical profession. Over and over again, an erroneous diagnosis is made on the basis of the laboratory findings, which would have been avoided and the correct diagnosis established by available simple methods of examination. This method of practice, and the false impression gained by the public through private and public group medical and surgical service with the usually attendant high cost, are tantamount to commercialism. It is recognized that the general practitioner, both in the city and in the country, lacks sufficient hospital facilities in the care of his patients. This lack is evident in some of the rural districts of practically all the States of the Union. Some feasible constructive program should be adopted which will afford justice to the taxpayers and to the members of the medical profession, and which will provide better hospital and diagnostic facilities where they are needed. We must, however, keep in mind the fact that a majority of patients do not require the application of unusual and refined methods of diagnosis, and also that a majority do not require hospital care. The pretentious program of some members of the medical profession and of uninformed members of the public for the irrational amplification of hospital beds for the treatment of practically all the ill and injured, is unnecessary and uneconomical, and promotes the disorganization of society.

TODAY'S PROBLEM IN DIABETES IN LIGHT OF NINE HUNDRED AND THIRTY FATAL CASES.

Whereas the death rate from diabetes in the Massachusetts General Hospital for the ninety years prior to 1914 averaged 28 per cent., since that date it has fallen to 7 per cent. In order to determine whether such a marked change in duration was confined to hospital cases, a study has also been made by Elliott P. Joslin, Boston (*Journal A. M. A.*, May 20, 1922), of the fatal cases of diabetes occurring in the city of Boston. Between 1895 and 1913 the average duration of life in the fatal cases of diabetes amounted to 3.3 years; for

1915 it was 4.3 years, and for 1920 it was 5.3 years. This result is believed to be the effect of treatment by the undernutrition diet. In any consideration of treatment for diabetes, Joslin says one must not lose sight of the enormous number of patients with diabetes and the necessity of treatment by simple methods. The general practitioner must have simple measures at his disposal. The justification for the test and maintenance diet card that Joslin now uses is that in practice it has shown a number of general practitioners and some patients how to become sugar free without danger, and—what is less dangerous but more difficult—how to enlarge the diet without the patient instantly showing sugar again; and finally, that of 536 cases treated in hospitals, the total deaths in the hospitals have been 11. These diet tables are described in detail.

ANOTHER MARTYR TO THE STUDY OF TYPHUS—A. W. BACOT.

When *THE JOURNAL* pointed out in a recent issue¹⁰ that the study of typhus fever not only requires expert knowledge and investigative skill of a high order, but also calls for real heroism, it could not have anticipated that within a few days another name was to be added to the list of the martyrs whom it extolled. On April 12 occurred the death of Arthur William Bacot, F.E.S., entomologist to the Lister Institute of Preventive Medicine in London, a victim of typhus fever which he contracted while engaged in an investigation of the disease at Cairo, Egypt. For several years Bacot has been an outstanding figure in the study of the bionomics of insects and their role in the transmission of disease. Since early in the World War he concentrated his energies upon the problems raised by the louse, into the life-history and habits of which species he entered with great skill and success. Plague and yellow fever each received Bacot's attention several years earlier; and in 1920 he joined the Typhus Research Commission of the League of Red Cross Societies to Poland in the labors recently reviewed in these columns.¹¹ In the course of this work he

¹⁰ Typhus Fever: A Study of Disease and Its Martyrs, editorial, *J. A. M. A.* 78:1054 (April 8) 1922.

¹¹ Consult Footnote 10. Wolbach, S. B. et al.: *The Etiology and Pathology of Typhus*, Harvard University Press, Cambridge, Mass., 1922.

contracted trench fever at Warsaw and has communicated an excellent, detailed account of that illness, furnishing one of the few reports of unusual disease described by a competent observer who was himself the victim. All who know him can bear personal witness to the fearlessness and skill with which Bacot undertook his experiments with dangerous insects during the dark days of the war at a time when the menace of these species was suspected; but our ignorance of the immediate agencies concerned in the spread of threatening diseases made all manipulation of experimental test materials extremely hazardous. Entomology, which had at one time afforded a delightful pastime to this English gentleman, later became a "ruling passion" with him. As an enthusiastic amateur he enriched science through conspicuous contributions; and as a professional entomologist applying his knowledge to the use of preventive medicine, Bacot became an almost indispensable worker in the protection of mankind. Accordingly, lest we forget, let us reiterate the names of those who, as a consequence of their researches, contracted typhus and died: Bacot, Conneff, Cornet, Jochmann, Luthje, von Prowazek, Ricketts, Schussler.¹²—*Jour. A. M. A.*, May 20, 1922.

FACTORS IN THE CAUSATION OF BOTULISM.

No one who has followed the recurring reports of botulism outbreaks in this country can have failed to notice that certain articles of food are implicated much more frequently than others. First come the foods preserved by heat. Since the air is expelled in the heating process and since the containers of these foods must be hermetically sealed, it is easy to see that the anaerobic conditions so produced provide particularly favorable opportunities for the growth of any *Bacillus botulinus* spores that have survived the heating process. As with other bacteria, so here, growth is hindered by a high concentration of sugar or brine or by a marked acid reaction. Botulism

from jam or candied fruits or from brine-pickled green olives is unknown; indeed, the disease has been very rarely attributed to the use of any sort of preserved fruit.

Since botulism from canned foods is always traceable to imperfect sterilization, to failure to destroy the spores of *B. botulinus*, it is not surprising that a relatively high proportion of botulism outbreaks should have been traced to foods canned in the household, where facilities for maintaining cooking temperatures considerably above the boiling point are not always readily available. Commercially canned foods, however, are by no means exempt, and several instances are now on record in which foods canned on a large scale by modern processes have given rise to cases of botulism. The Kendallville, Ind., outbreak, which is described in this issue, is an example of poisoning due to a commercial product.

While the reasons for the apparently greater liability of some foods to contain the botulinus toxin are quite obscure, and while the conditions under which botulinus toxin is produced are possibly connected with the composition of the foodstuff and still remain to be worked out, there are other instances in which a plausible explanation may be advanced. It is evident that relative ease of heat penetration must be an important factor in attempts at heat sterilization. Certain foods are much more easily dealt with in this respect than others. Heat penetration is hardly a factor in canning soups, for example. From this standpoint it is tempting to conclude that the recent outbreaks of botulism traced to eating canned spinach, such as the one at Kendallville, afford an illustration of the importance of securing adequate heat penetration. Spinach and some other foods are recognized as presenting special difficulty. There is no doubt that with such foods the size of the container and the amount of material in each can are important factors in the possible causation of botulism. It is reassuring to find that the interests concerned, including state and national health authorities, are alive to the difficulty of the situation, and that suitable standards for the size of the can and amount of material as well as for sterilizing temperatures are being strictly applied. —*Jour. A. M. A.*, July 1, 1922.

¹² Obituary notices of Bacot will be found in the *Lancet*, April 22, 1922, p. 817; *Brit. M. J.*, April 22, 1922, p. 662; *London Letter*, this issue, p. 1550.

RADIUM EMANATIONS IN EXOPHTHALMIC GOITER—BLOOD VESSELS OF ADENOMAS OF THYROID.

Radium emanations have been used by Wallace I. Terry, San Francisco (*Journal A. M. A.*, July 1, 1922), and his associates in thirty-three cases of exophthalmic goiter. Only patients suffering from an extreme degree of hyperthyroidism, due to hyperplasia of the thyroid—the true exophthalmic goiters, have been subjected to this form of treatment, and only with the idea of converting them into better risks for major surgical procedures. Final results have been obtained in sixteen of the thirty-three cases in which radium emanations were received. Fourteen patients had resections of the thyroid after intervals varying from 32 to 114 days after radium. One patient died two days after a bilateral resection from acute hyperthyroidism. Another patient died nine months after resection of both lobes from recurring hyperplasia of the thyroid (substernal) and marked hyperplasia of the thymus and a terminal pneumonia. A third patient died three months after radium, from cirrhosis of the liver. A fourth patient died fifteen days after bilateral resection of the thyroid, from acute yellow atrophy of the liver. Ten patients are definitely cured after resection. Of these, one had diabetes mellitus, which has apparently disappeared since resection. Another had profound toxemia with jaundice at the time of entrance. In two cases there has been an apparent cure by radium alone. The amount of emanation and the number of tubes Terry says should vary according to the size of the goiter and the intensity of the symptoms—from 4 to 10 millicuries, contained in from six to eight tubes. The emanations are of value in preparing bad risk cases of exophthalmic goiter for further surgical treatment. The emanations should not be used in adenomatous goiters.

CONGENITAL MALFORMATION OF THE HEART.

In the case cited by O. J. Raeder, Paris, France (*Journal A. M. A.*, July 1, 1922), the congenital malformation of the heart was associated with complete obliteration of the pulmonary artery. There was definite evidence of a probable fetal endocarditis (small nodules on the valve cusps of the tricuspid valve). This would seem to lend argument to the theory of fetal inflammation. However, the presence of anisopsia (the right eye was larger than the left) and the curious branching of the vessels of the aortic arch, Raeder says, point with a more reasoning finger to the embryogenic theory. The advanced age of the mother (40) is another factor in favor of the latter theory, since it is known from statistics that anomalies are more common in the offspring of primiparous women of an advanced childbearing age.

ETHER AND LAVENDER

If some men had the brains they think they have, it would be possible to cut their hair with a lawn-mower.

One of the questions asked of a contemporary by a humble patient who kept a boarding house for men, was, "Is piles ketchin?"

When attending a "Hooch" party and a man commences to butter his watermelon, it is time to go home.

The man who talks much, says little—when the tongue works, the brain loaf.

HEALTH HINT.

Never shake pepper in a baby's right eye.

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ORIGINAL ARTICLES

INTRODUCTORY REMARKS.*

JOHN J. BAXTER

WOONSOCKET, R. I.

REMINISCENCES OF SURGERY FOR LAST 36 YEARS OF MY PROFESSIONAL LIFE IN WOONSOCKET.

We all should be thankful to have lived and seen the marvelous advances made in both surgery and internal medicine as well in the last 35 years.

In looking back to the year 1885, my graduating year, I well remember one of the questions we were asked was, Describe the five different kinds of pus found in operative wounds, from laudable pus to virulent pus. Just ponder for a moment. The mental irritation and fear that the best surgeons of that time must have felt with this ghost of laudable pus if not one of the more virulent kind appearing in their wounds for operations that were accurately and technically done in a most skillful manner, because it must be said that these old surgeons were splendid anatomists and particularly dexterous in the use of surgical instruments.

With the coming of the great Sir Lister of England, who applied the germ theory of the great French savant, Pasteur, to the science of surgery, the antiseptic era of surgery was born.

Antiseptic surgery proved the death-knell of laudable pus and gave to surgeons a confidence and certainty of clean wounds following operations, that was never felt before in the field of surgery.

To show the natural law of necessity is the mother of invention, these older surgeons in the pre-antiseptic days, in order to prevent laudable pus destroying their wound healing, used to drain most all of their large and deep wounds. It would seem queer, at least to the younger generation of surgeons, to attend an operation when antiseptic surgery was first brought about.

Everything that was used at an operation was soaked in hot carbolic acid solution, sheets, towels, swabs, gauze dressings, instruments, in fact, everything that in anyway came in contact with patient was soaked in an antiseptic. Your patient was literally done up in a wet pack, and to make antiseptic doubly sure, the air of the operating room was filled with carbolyzed steam, to kill the germs floating in the air.

The surgeon's hands were scrubbed with soap and hot water, then immersed in either bichloride of mercury 1-1000 or carbolic acid 2% solution, the skin of the patient was scrubbed and antiseptically cleansed, same as the surgeon's hands, the wound was dusted with iodoform. Iodoform dressings with plain gauze on top.

As time went on, reports of deaths occasionally laid to the door of carbolic acid poisoning were reported.

This caused the omitting of carbolic spray, which was supposed to be the cause. Then about this time another English surgeon, Dr. Lawson Tait, began to report cases where no antiseptics were used and his mortality rate was the lowest of the time. Like all geniuses, he was scoffed at and almost ridiculed for his heresy in disbelieving the necessity of the antiseptic regime. At that, he did what is now well known as aseptic surgery. It is told of him that at an annual meeting of continental surgeons of Europe, some of the German surgeons, in the discussion of his paper or report of 1,000 laparotomies done under aseptic instead of antiseptic preparation, asked how he obtained such splendid results without antiseptics being used and in his blunt English way he told them he obtained his results by keeping his fingernails clean.

During my student days and the earlier years of my practice, most all the surgeons in this State were trained and operated in the old pre-antiseptic days. As a trend of the times, I will relate a concrete example of an operation done during the first year of my entrance into the professional life of Woonsocket.

I attended the wife of a local dentist, who suffered from a growth of the right breast, of prob-

* Read before the quarterly meeting of the R. I. Medical Society at Woonsocket September 7th, 1922.

ably a malignant nature. As in those days, our late lamented Dr. Hils was the only local surgeon big enough to be considered, but the family wanted a bigger surgeon, so an eminent surgeon from Providence was engaged for the removal of the right mammary gland.

DESCRIPTION OF PRE-ANTISEPTIC DAY OPERATION.

Upon the morning of the operation everything was made ready. The dentist's office was made up into an operating room. Upon the arrival of the Providence surgeon, I noticed that he carried only a small, ordinary handbag and wondered where all his instruments, dressings, etc., were. I soon found out; after removing his coat and vest and rolling his sleeves, he went into the kitchen and brought forth the ordinary kitchen basin, filled with warm water. He brought forth a bottle of carbolic acid and dropped in about one-half teaspoonful from the bottle. He next dove into his bag and brought out a paper bundle full of tow. I found out that this, too, was to be his sheet anchor against laudable pus destroying his wound. Next he brought forth a pocket case which most all surgeons used in these days for emergency surgery. His scalpel was one of the old bone-handled, doubled-bladed knives which gave you a choice of two sizes, a few artery clamps, and scissors, and finally he took from the pocket of the case his needles and silk thread.

After threading his needles with silk, he dumped all into this probably $\frac{1}{4}\%$ carbolic solution, then went to work. No shaving of axilla or skin of breast, no soap and water, no antiseptic solutions used.

After enucleating the diseased mammary gland, he filled the gutter left by its removal with this bundle of tow, then closed the wound with silk ligatures, a layer or two of gauze, which was banded on. In about two days the patient's temperature reached 102° , at the fourth or fifth day was over 104° and my patient was in the throes of a severe septicaemia, the wound literally oozed pus. The stitches were removed, also the bundle of tow, the patient made an heroic fight and after three weeks made a recovery with an adherent ugly scar.

I also assisted Dr. J. P. Hils a number of

times, in breast cases. He did what might be called a modified antiseptic. He did not boil his instruments, but he thoroughly cleansed the wound and his hands, as well as his fingernails. After closing the wound, he would flush it with hot carbolic solution, putting in the nozzle between the stitches.

EARLY STRUGGLES FOR SURGICAL RECOGNITION.

Five years after my beginning practice here, the Woonsocket Hospital was built. This proved to be a great step in advance of the old regime. A hospital staff was appointed, consisting of six men, including Drs. Geo. H. Jenckes, Stillman, Paine, Monroe, Hils and myself. We each served two months apiece and attended both medical and surgical cases.

For a number of years this programme was kept up. The old operating room was then where the diet kitchen is now.

In those years of the long ago, all the major abdominal surgery was performed by outside surgeons, usually from Providence or Boston. Once in a while I might get a chance as second assistant. Even this chance was rare. As the years rolled by, this same local condition existed until finally, to me, at least, it became irksome. I used all my persuasive powers to try and coax Dr. Hils to assume the responsibility of doing major abdominal surgery, but he declined, and as all the other members of the staff were either too old for heavy surgery or were not surgically inclined, I found myself was to be the original major abdominal surgeon of the city or wait until sometime a man might settle here who would do so.

I determined in my own mind to make the try, because I clearly saw these imported surgeons came here, got all the glory, and to me, what was worse than that, they got away with all the swag and hence if it was in me I determined to block it. My next move was to go to New York City a number of times and brush up in the post-graduate schools and take night cadaver classes in major abdominal surgery. I came back to my work full of enthusiasm and a youthful conceit and confidence that the public and doctors, in particular, would be convinced that I had arrived. But lo! I arrived here all right, but not as a surgeon of the major class.

I soon saw the futility of trying to interest the older members of the staff, so I turned to the younger members of the profession for help and in this I was temporarily successful. My first opportunity to perform an abdominal operation came through Dr. William F. Barry. The doctor was called to case of ruptured ectopic gestation. His patient was in collapse with cold, clammy skin and thready pulse. He called me in council. We both decided that active hemorrhage was going on in his patient's abdomen. We also decided that it would take so long for an outside surgeon to get here that immediate operation was the safest and as Dr. Barry was willing to trust me, we telephoned Miss Slade, the hospital matron, for permission to operate. She consented. The patient was brought to the hospital. At operation an active bleeding ruptured ectopian in the right hand ligament was found. The sack was clamped off and amputated, the abdomen quickly closed and active stimulation begun. She made a good recovery, for which I gratefully thanked the Lord. One or two other laparotomies soon followed, the younger men assisting me.

Of course, it must be remembered these younger doctors were not members of the staff and of course I was breaking the rules, operating with non-members. So they soon put a stop to my aggressiveness by appointing Dr. Henry Rolfe Brown of Providence the abdominal surgeon of the hospital and for a few years he held sway and I was forced to do my operating in houses, and this I did, for I was determined to die hard. During this time I discovered that the three French doctors, old Dr. Gideon Archambault, J. P. C. Marander and Dr. Joseph Boucher, confreres of Dr. Joseph Hils, were very much inclined to sympathize with me and they really kept me fairly busy doing their surgery for them and it was pay surgery at that. As I look back in the years of these scenes, I thought at the time I certainly was some surgeon to attract the attention and support of these men, but now, as an old man, I see it more clearly; they gave me their surgery to do so as to make Dr. Hils feel piqued, for they all disliked him personally and were glad of an opportunity to show it. So another of my youthful conceits, like Æsop's frog, was busted.

As hope springs eternal in the human breast, the younger medical men, together with myself,

kept the candle of hope burning strongly, for they were as anxious to be recognized as members of the staff as I was for recognition as a surgeon, as a sidelight showing the feelings we had toward each side.

I conceived the idea that if I went to Dr. Geo. N. Jenckes' friends and besought their help, I might cause a change in his feelings towards me. So I would go with a pitying tale of how cruel I was used and I must have almost cried with emotion, until one day the old doctor met me after being harassed by one of his friends. It was at a hospital meeting. He said, "Look ahere, Baxter, if you are going to fight, for God's sake be a man and fight like one. Don't go around to my friends and cry and blubber to them to get sympathy for yourself."

It was not long after this that Dr. Rolfe Brown resigned as abdominal surgeon, and the trustees appointed Dr. A. M. Weeden and myself as full surgeons, and the younger men were appointed as medical men on the visiting staff.

Since that time the surgical staff has been increased to four visiting surgeons, with four assisting surgeons and others crowding in for recognition, also a very excellent nurses' training school under the direction of the matron, Miss Lucy Ayers.

Before closing, I wish to say a few words in regard to the Woonsocket Hospital.

Whatever our personal feelings may be, or our likes and dislikes, the stern fact remains that we all owe a great deal to the hospital, especially the younger, striving surgeons and the younger physicians as well, if they are awake to take advantage of the opportunities that a hospital gives them. I feel confident that local surgery, at least, could not have progressed in such a splendid manner if it were not for the fact that we had a hospital back of us.

I wish to make an appeal to those young, sterling, aggressive surgeons and medical men also, who are to take the places of us older fellows that have reached the sear and the yellow and in a few years more will have been called to their reward in another world. That they will show a broader spirit of brotherly love towards each other than their confreres who have gone before. By brotherly love I don't mean making molly-coddles out of yourselves, but just honest-to-God, good fel-

lows, for it is my honest belief that before many years the incoming men who enter this grand old, old profession of ours will be forced through the law of self-preservation to stand up for each other, for each one will find after his long, tedious 10 years of hard drudgery, in his academic course of four years, his medical course of four years more and two years in hospital training from pus bug to house surgical and medical, when he leaves the hospital full of enthusiasm and wonders whether his right hand will stand for all the shaking it will have to endure, he will probably wake up to the fact that his right hand is still cool and that the world surrounding him is cooler still, particularly when he finds he is as a young struggling medical man up against college clinics, hospital clinics, out-patient clinics, tubercular clinics, urological clinics, good and welfare clinics, mill clinics and group clinics and the Lord knows how many more there are to come.

There will be moments when he certainly will wonder where he comes in as far as getting any private patients to help him pay his board and office rent is concerned.

It is also my belief that this lack of brotherly feeling among ourselves is a potent cause of why that vast army of chronic sufferers who come to us pay us our fees and then leave dissatisfied and go to those outside cults for relief, giving them praise, glory and fat fees. I have often wondered why this is so. As all of you know, the majority of this large class of chronic neurasthenics, chronic neurotics, myalgias, dyspeptics, et cetera, et cetera, come to us first. Reading an article in Collier's Weekly lately, I thought I discovered one of the reasons why this is so. The writer very vividly describes his going to a chiropractor. After grotesquely describing the stunts he put him through, such as jumping over chairs and tables, finally putting him upon a table and pounding him good and plenty, he leaves and, as he says, takes to his bed and stays there four days. It required four days in bed for him to recover from the treatment he received. He wound up the article by saying, I paid the doctor his fee because I thought he earned it. Now, gentlemen, to my mind, that is the layman's psychology. He paid him his fee because he thought he earned it, and they leave us because they think we at least do not understand their sufferings, which to them is as

real as if they suffered from some acute illness that could be relieved either by therapeutic measures or self-limitation.

Recently one of our own essayists had the nerve and pluck to tell his medical audience that the majority of medical men were too lazy mentally to grasp the right attitude or to take the necessary time to delve in our own medical literature and find therapeutic means to relieve this class of chronic sufferers with their vague pathologies. Be that as it may, I contend that we must do something more than patiently listen to the recital of their sad tales of suffering, write a prescription and give perfunctory advice. It would be far better for us to try and understand their psychology as regards their own suffering and patiently delve into our own medical literature for therapeutic means for their relief and by so doing prevent a goodly proportion of them from seeking relief in these outside cults, and by so doing we might prove to these outside medical make-believes that we were not only well trained in the science and art of the practice of medicine and surgery but that we were also well trained in the science and art of the weaknesses of human nature.

THE PROBLEMS OF THE HEALTH OFFICER.

BY CHARLES V. CHAPIN, M.D.

Superintendent of Health, Providence.

It is easy to accede to the Editor's request for an article on this subject, for the problems are endless. There is more to learn than has been learned. There is more to do than has been done. Every year the field of public health widens and the problems increase.

The most serious problems to be met are the fundamental ones; those concerning the cause of disease and its prevention. For preventive medicine, or, indeed, for any branch of medicine, to be successful, it must have a scientific basis. To separate the wheat from the chaff is by no means easy. Few medical men, and few health officers, have had a scientific training. They often seek for what they want, rather than for the truth, and thus the judgment is biased and logic forgotten. Since the social worker and the publicity man have made themselves the connecting links be-

tween scientific medicine and the public, the danger of false steps has become greater.

So much has been learned about the infectious diseases that we sometimes forget how much is still unknown. The causative germs of so many diseases have been discovered that we are apt to forget that we still are entirely ignorant about those of many of our most common infections. We do not yet know the germs of scarlet fever, measles, smallpox, chicken-pox, rubella, poliomyelitis, and most important of all, influenza. We cannot classify colds, or sore throats, and know very little about the germs which cause them. We know very little about the causative agents of diarrheal diseases, except the dysentery organisms.

It is true enough that it is sometimes possible, as in the case of yellow fever, to control a disease though we do not know the germ which causes it. It is nevertheless true that the discovery of a specific germ is a great help, for if it does nothing more, it usually renders diagnosis possible, and without diagnosis little can be done. The easy determination of its germ is likely to expand our knowledge of any disease.

The exact knowledge of the manner of spread of contagious disease is often of as much practical value as the knowledge of the germ which causes it. The greatest triumph of medicine has been the control of the insect-borne diseases, yellow fever, malaria, typhus fever, remittent fever, sleeping sickness and plague, and for some of these diseases the mode of transmission was determined, and effective methods of control devised, before the causative germ was discovered. Conversely, we may know a great deal about the mode of transmission and also about the germ without being able to devise any effective means of control, as witness gonorrhea and syphilis.

The great problem of the present time is the control of what have come to be called the respiratory, or sputum-borne, diseases. These diseases are not always respiratory, or always sputum-borne, but the infection is found in the secretions of the mouth and nose and they are all suspected to be spread in much the same way. They are our commonest diseases. Vaughan, in his monumental work on the infectious diseases, now in course of publication, includes in this group colds, pneumonias, measles, rubella, smallpox, chicken-pox,

diphtheria, scarlet fever, mumps, whooping cough, influenza, tuberculosis, leprosy, epidemic meningitis, poliomyelitis and glanders. He might have added tonsillar infections. The Great War emphasized what many of us had felt for some time, that comparatively little progress has been made in the prevention of the spread of these diseases. We can prevent smallpox by vaccination, can cure diphtheria and meningitis with serum and by healthful living can prevent the translation of tuberculous infection into tuberculous disease. We can, perhaps, reduce the virulence of some diseases, but we are far, very far, from stamping out these diseases by preventing their spread.

We have learned much about the modes of infection in the "respiratory" diseases, but we need to have much more accurate information about the relative importance of contact and droplet infection, the sterilization of eating utensils and the utility of cleanliness in daily life. Most of all, we need to devise more effective methods of control. Not that more rigorous methods, or more strict isolation, is needed. I believe that it is quite otherwise and that more effective control of infection could be secured with considerable letting down of present day restrictions, provided a more constant and therefore more effective official supervision could be maintained.

What shall be our attitude towards pneumonia may be cited as an example of a contagious disease problem. Many, high in authority, urge that it be made a reportable disease and it is in many States and cities. What for? Is it that it may be studied? What State or city has made, or proposes, a serious epidemiological study, though it is needed badly enough? Is it to prevent its spread? Pneumonia is surely a contagious disease, but what evidence is there that there will be any less if we placard and keep the contacts in the house and make attendants wear a gown? Is it possible to control contacts and carriers of the pneumonia germs?

Influenza is a colossal problem in itself. We do not even know what influenza is. Some think the great outbreak of 1918 was not influenza. Some think that the mild outbreak of last winter was not. It is surely a contagious disease, but efforts to transmit it from one human being to another have been futile. Some think Pfeiffer's bacillus is

its cause, others do not. The best observers agree fairly well that none of the measures adopted for its control had any appreciable effect.

Tuberculosis has a whole circle of problems all its own. The deaths from this disease have shown a marvelous decrease. What are the causes and what are their relative importance? Are most infections acquired in early life? Is it worth while to try to prevent infection, or is it hopeless, at present, so that nothing remains but to prevent its activation. Are hospitals and sanatoriums worth their cost? Are routine physical examinations to be the chief reliance of the future, and if so, how are they to be brought about? Is nutritional work in the schools the best way to prevent the disease?

Another great problem is to determine the field of State or communal medicine. It was formerly assumed, and many today firmly believe, that the State should concern itself with contagious diseases only and strive, chiefly through its police power, to restrict the spread of infection and to control the environment by means of water-works, sewers, housing reforms, food control and the like. Gradually it has come to be believed that there is no logic in confining community effort to the contagious diseases, or to police control. It is just as useful to prevent heart disease as influenza. It is more effective to vaccinate and give antitoxin than it is to clean back yards and inspect plumbing. For my own part, I am convinced that anything is legitimate public health work which the State, or city, or any group of citizens, can do better to prevent sickness and death than private physicians can do, or are likely to do if they can. For me, that part of the problem is solved. Anything that the members of the medical profession, as it is now constituted, can do better than the State, should be let alone by the State. Anything that the State, or a group of citizens, can do better, they should do, no matter whether it is preventative or curative. The real problem is to decide in any individual case.

Should a city health department administer diphtheria antitoxin to the poor? I am sure many lives can be saved by so doing and so it is a proper municipal function, no matter if it is curative medicine. Is it for the best interests of the children to leave the after care of poliomyelitis to individual initiative, or should community effort be directed, as it has been in some cities and States, to securing

the very best medical supervision and seeing that treatment is persisted in? That, too, I am sure about. Is it wise to leave the removal of tonsils and adenoids to the undirected judgment of parents, or should every effort be made to induce parents to submit their children to operation? If it is true, as some allege, that removal of infected tonsils and adenoids increases the growth of children four-fold, prevents the acquirement of infectious diseases, saves the child from deafness, advances it in its studies, cures the carrier state and prevents arthritis and heart disease, and if it is true, as some allege, that half of our children have such tonsils then free tonsil clinics should be maintained by the city, or by private philanthropy and the most strenuous efforts should be made to induce attendance. For me, the real problem is whether these allegations are true. I am by no means certain.

Notwithstanding the formidable problems relating to the contagious diseases still to be solved, great things have been accomplished. These diseases are far less prevalent than formerly. It is very different with cancer and the cardio-vascular-renal diseases. We are urged by many to attack these diseases of advancing years. Of the causes we are profoundly ignorant, but something may possibly be accomplished by teaching the prompt treatment of cancer and there is reason to believe that special clinics for cardiac disease would accomplish as much in teaching right ways of living as special tuberculosis clinics have done to help the consumptive to better habits of life, but there are enormous problems yet to be solved in connection with the causation of these diseases.

Human beings are prone to be over-enthusiastic about anything in which they have come to take special interest. They lose the sense of perspective. Fresh air is good, but it is a real problem whether faith in its efficacy is not carried to an extreme. Enthusiasts tell us that open window school rooms increase the growth and the mental efficiency twenty-five or even fifty per cent. Such persons would make all school rooms open air rooms. A recent article alleges that the teeth are a great source of disease and their proper care in children results in mental and physical improvement equal to that claimed by the advocates of the universal use of the open air room. As was referred to above, the enemies of tonsillar and ade-

noid tissue claim that its removal, when indicated, increases the growth of children four-fold. Others believe that the chief hindrance to the growth of the child is faulty diet and lack of sleep and the nutritional clinic is advocated as a panacea. Still another and older cure-all is having a recrudescence, and the importance of posture looms exceedingly large in the minds of a certain group of medical men. Who shall place all this in its true perspective?

It is truly said that sanitary instruction is more important than sanitary legislation. The problem is what to teach and who shall teach it? At present the latest fad is preached the most, and the professional advertiser is doing a good deal of the preaching. I am old-fashioned enough to believe that we should teach only the truth. How can we teach people to see that medicine is a real science, though an imperfect one? It certainly is a hard job when there are so many unscientific doctors. How can we undo the teaching of ten thousand years that medicine is half magic? If we could eliminate a lingering faith in the supernatural, most of the cults would never see the light of day. How can we correct the careless mistakes of the last generation and lead the public to understand that preventive medicine is more than scavenging? How can people be taught that it is more important, for health's sake, to keep the fingers out of the mouth, than it is to report a neighbor's ash heap to the health department? How teach the plumber that it is better to install a lavatory such as surgeons use, so that the hands can be washed clean, than it is to line the bathroom with marble slabs? How can mothers be taught that fresh air is better for their girls than French, and milk is better for their boys than movies?

Then there is the problem of the mid-wife. The education of some midwives and the elimination of others, has reduced the number of our midwives thirty per cent. It has been said that a good midwife is better than a poor doctor and very likely that is so, but what is needed is more good doctors.

Another problem is the nostrum evil, and it is a great evil, but fortunately not so great as it was. Few municipal, or State, health officers have ven-

tured to attack it, though some, like Dowling of Louisiana, have waged a valiant fight. The A. M. A. has done wonders and nurses and social workers have carried the message to myriads of homes. Education, of course, is the effective weapon, education, persistent, insistent, aggressive, tactful and truthful. It is necessary not only to show the worthlessness of nostrums, but the worth of modern medicine must be contrasted with the dangers of self dosing with patent medicines. This sort of education, too, is the greatest weapon against the "cults." The popular medical column of the daily press has a wonderful opportunity. The problem is to make good use of it.

Doubtless the greatest health problem of all is the physician. If every physician was like the best, like those hardworking, conscientious, progressive men of sound judgment, who are the leaders of the profession in every community, there would be no such problem. There are many who are quite otherwise. If nostrums and crazy cults were banished, matters would not be so very much bettered, unless all doctors were good doctors. If every physician would give every expectant mother the best of care, would apply the Chinese custom to the babies, keeping them well, rather than curing them, would vaccinate every child against smallpox and diphtheria, would consider every sore throat serious until proved otherwise, would use diphtheria antitoxin as it should be used, would suspect tuberculosis when it should be suspected, would really cure his syphilis cases, would apply the most approved treatment to his poliomyelitis, would see to the removal of infected lymphoid tissue, the health department would not have to worry about the establishment of prenatal clinics and well baby consultations, of nutrition classes, or of Tb. or V. D. or polio, or adenoid clinics and the department could discharge most of its nurses and doctors.

There is another problem, perhaps the most disheartening, which fortunately has not worried me much, but which not a few health officers outside of Providence have to face, and that is the apathy, or dictation of self-seeking politicians. I see no solution for this problem.

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EDITORIALS

OLD AGE AND BLOOD PRESSURE.

As we multiply our instruments of precision and with them the accuracy of our clinical observations, the seeming simplicity of our problems disappears and we apprehend with growing experience the enormous complexity of living organisms. Take any problem you please—immunity, anaphylaxis, metabolism, endocrinology—and at-

tempt to establish a rule of universal validity and you fail, for the good reason that each individual is a law to himself and in his, so to say, biological waywardness, refuses to be confined within any rigid formula. Human nature is gothic, not classic, and even in old age men insist on being various: as in their integrations, so in their disintegrations, they belie our prophecies.

Formerly we believed that with advancing years we may look for an increment of blood pressures, but now we know that such is not the truth, as a recent interesting article in *The Lancet*¹ informs us, thus confirming our suspicions. Imbued with

¹ Old Age and Blood Pressure Problems. Thompson and Todd. London *Lancet*, Sept. 2, 1922.

the current teaching, the authors were soon puzzled by the paradoxical readings in men over 75 years of age whose radial arteries were nodular "pipe-stems," one patient showing a pressure of 195/100, another apparently parallel, 140/75; a third 115/70. They then took readings of 102 pensioners, all from 75 to 92 years of age, with interesting but inconstant results.

Up to and including middle age, the heart, in the absence of obvious endo- and myocardial disease, may be accepted as a constant factor, as may the arteries in the absence of appreciable sclerotic change. Under such circumstances it has been possible to formulate a standard or "normal" of pressures taken from many thousands of individuals. But on the other hand, it is impossible to set up a normal for a degenerated heart, the action of which cannot be guaranteed from hour to hour, nor, indeed, from minute to minute. General or localized arterial disease again precludes the possibility of supposing a standard applicable to old people. While it is not suggested that every man over 80 years of age has a degenerated heart or established disease of the arteries, it may be presumed that after so many years of constant use they are the worse for wear, and from post-mortem observations the authors believe that the large majority of old people have deteriorated cardiovascular systems. Furthermore, of the nervous, chemical, toxic and mechanical factors regulating and modifying the caliber of the blood vessels and the rate of flow of the blood we *know* nothing, though of course we are fertile, perhaps too fertile, in surmises, hypotheses and opinions.

Plotting out a graph, the authors show that 54 out of 102 men showed a systolic pressure of 130 to 169, while 31 of these 54, that is, the majority, exhibited pressures of 130 to 149. An undoubted majority, 54 out of 102 cases, showed diastolic pressures of 50 to 89. But to apply these figures as "normals" for this period of life is plainly impossible when one is faced by the active die-hards with signs of neither hypo- nor hypertension and no apparent answer to the puzzle that their pressure readings vary from 190/100 to 95/45. Categorically to deny, as some do, that blood pressure having attained a certain level can change to a lower level and be still compatible with the individual's well-being, is to discredit the adaptation

of which the system is known to be capable, and of which further evidence is continually forthcoming as scientific research proceeds.

There are many clinical findings for which no satisfactory explanation is extant. Take the kidney as an example. Granted that signs of disease may not be demonstrable until a large portion of the kidney is out of action, at what stage in the disorganization of renal tissue does the kidney take a part in the production of high pressures? And to what extent do the conditions grouped under the rubric of nephritis come into the hyperpiesia picture? It seems generally agreed that the "red granular" kidney and the "arterio-sclerotic" kidney are histologically the same, so far as the vascular elements are concerned; and yet, although the authors see many arterio-sclerotic kidneys among their old men, they do not see the syndrome associated with the red granular kidney. It seems a reasonable suggestion that the more early fatal red granular kidney may be a condition, toxic in nature, primarily renal in origin, which works back along the arterial system to the heart; while the arterio-sclerotic kidney may result from primary hypertension operating centrifugally from the heart. But it is certain that whatever the starting point, whatever the specific difference in the effects between these differently named but similar conditions, an adaptation compatible with extended life can be arrived at between the weakened but still brave heart and the damped-down furnace of old-age metabolism.

The net result of these observations is that in old people, blood pressure readings are of more theoretical than practical interest in diagnosis or treatment. A man over 80 years of age, with no subjective or objective signs, whose organism has become adapted to a 200/100 pressure, is not a case of hypertension to be dosed with nitrites and iodides, to be rigidly dieted, and subjected to various forms of mechano- and balneo-therapy.

Finally, his or her blood pressure is not a subject to be discussed with the patient. If worry and anxiety are bad for the patient (and who will deny it?) then to give him the occasion to brood over the fact that he is "suffering from high blood pressure" is to embitter his life without doing him a particle of good.

THE CONTROL OF DIPHTHERIA.

When antitoxin was first introduced it was believed that diphtheria would soon be practically an unknown disease. As the years have gone on, diphtheria is still with us and, although in some communities it shows a decrease in numbers and in others seems to exhibit a lessened virulence, it still remains an important public health problem.

The importance of early diagnosis has been stressed by public health officials and those connected with contagious hospitals, and statistics have shown how important this is. In a series of over 4,000 cases in Chicago, the mortality varied according to the time of diagnosis. Those recognized and treated on the first day had a mortality of only .27%, on the second day 1.67%, on the third day 3.77%, on the fourth day 11.39%, and the cases treated that had been in existence for more than four days showed a mortality of 25.37%. These figures also showed that 29% of the cases were not recognized until the fourth day or later and it is this fact that keeps the average mortality for all cases around 8%.

The introduction of the Schick test for determining immunity and the improvement in immunization by the toxin-antitoxin method have made the outlook for the future more bright. Park and Zingher have shown definitely that those susceptible to diphtheria can be rendered immune for a period of three years. This method has now been tried enough to be no longer in the experimental stage and should be more universally adopted.

The first step for the universal adoption of these important methods seems to be through the schools. Many of the cases occur in the children of school age and because of the contact in the school. This would bring home to the parents the real advantages and further education, emphasizing the desirability of protecting the pre-school child from the most serious laryngeal type of the disease, would influence the parents to have the younger children protected. Then the near future would surely show a diminution in both the incidence and the mortality of this too prevalent disease.

With winter approaching, we are facing, in addition to the usual indispositions and illnesses, the possibilities of critical conditions incidental to and

dependent upon the very probable fuel shortage. Hundreds of families have not the usual supply of coal and it is more than speculatively evident that soft coal may be the only obtainable, and under some circumstances even the availability of this may be a matter of conjecture. It is therefore wholly within the province of probability that poisoning by coal gas will become one of the important factors of conditions that will claim our attention. In the face of this likelihood, it would not be amiss to investigate more closely the conditions having to do with the combustion of bituminous coal in furnace and cook stove and have some workable ideas conveyable to the average household as to its safe utility. Not only will we be called upon to treat the result of coal gas, but we may be reasonably expected to intelligently instruct in regard to the use of the coal.

A RESUME OF THE FACE AND BROW PRESENTATIONS AT THE PROVIDENCE LYING-IN HOSPITAL FOR THE LAST TEN YEARS.

BY DR. B. H. BUXTON AND DR. S. C. WIGGIN.

Out of 9,321 cases delivered in the last 10 years, there have been 63 brow and face presentations, or 1 face or brow to 147 other presentations, or .69%.

Forty-five of these were face presentations, 1 to 207 other presentations, or .4 of 1%.

Eighteen of these were brow presentations, 1 to 517 other presentations, or .19 of 1%.

Of these 63 cases, we can only consider statistically 59, as the records of 5 of the cases are now at the binder's.

Forty, or 62% of these 59 cases, were multipara. Twenty-three, or 38% of these 59 cases, were primipara. Average age was 30 years.

Position: 19 were M. L. A., 22 R. M. A., 6 L. M. P., 12 R. M. P., 70% therefore being in the anterior position.

Length of labor: From the shortest, 2 hours 22 minutes, to the longest, 90 hours, average duration being 22 hours 24 minutes.

Thirty, or 71% of the face presentations were delivered spontaneously, 23 of these 30 being cases with the chin in the anterior position.

Twelve, or 29%, of the 42 face presentations were delivered by some operative procedure; 8 of these 12 cases being cases with the chin in the pos-

terior position. Of the 4 cases with the chin anterior, 2 were simply low forceps, and operated because of irregularity of the foetal heart, and not because of any dystocia; 1 other operated on account of toxemia, and not because of the dystocia (an easy delivery). There was only 1 chin anterior case that offered any serious difficulty.

Of the brow presentations, 5 out of the 16 delivered spontaneously, 2 of these being prematures, offering no difficulty; the others being converted spontaneously into vertex position, and delivering after a long labor. Eleven out of the 16 brow cases required operation.

Of the operative procedure: There were 4 cases in which forceps were applied to the face presentation, and the face delivered as such; 2 of these, the face being first rotated to the anterior position before the forceps were applied. There were 2 cases in which the head was flexed and head rotated to anterior position, and the patient delivered herself thereafter. There were 7 cases in which the head was flexed, and in some cases rotated, and then delivered with high forceps. There were 7 cases in which forceps were attempted and failed and some other procedure had to be adopted. There were 8 internal pedalic versions. There were 3 craniotomies.

Deaths—Maternal: There were 3 deaths; 2 died as a result of the operation and 1 died of toxemia, and in no way was due to the face presentation. The maternal mortality, as a result of the dystocia, was 3%.

Infants: There were 20 infants who died from all causes in the series of 59 cases, or 30%. A further consideration of these reveals 1 was a hydrocephalic, dead on admission, requiring craniotomy; 6 were anacephalic monsters, and were born dead, or died soon after; 3 prematures died of toxemia, leaving 10 cases who died as a result of the birth, or operative procedure, making an infant mortality of 22%.

Three of these 10 were dead as a result of interference before entrance to the hospital. If these are left out of consideration, our own hospital infant mortality would be lowered to 7 cases in 46, or 15.2%.

It is interesting to note that 6 of the cases were anacephalics, 1 a hydrocephalic and 9 were prematures.

Condition of Perineum.

There were 31 that had no new tears.

There were 8 that had first degree tears.

There were 12 that had second degree tears.

There was 1 that had third degree tear.

There was 1 that had an episiotomy performed.

Forty-one per cent therefore required some repair of the perineum.

Conclusions.

(1) The occurrence of face and brow presentations in our series compares fairly accurately with other observers.

(2) As would be expected, the occurrence is twice as common in multipara, and occurs at the average age of 30.

(3) The large majority are in the anterior position.

(4) The length of labor is decidedly increased.

(5) The large majority are delivered spontaneously if left alone, it being only the chin posterior positions which offer the difficulty in almost all the cases; this applies to the face presentations.

(6) Almost all of the brow cases required operative procedure.

(7) The operations varied from rotation and flexion of the head, with spontaneous delivery, to forceps to the face as such, to flexion of the head and application of forceps, to version and extraction, to craniotomy.

(8) The forceps are often attempted and fail, and some other procedure has to be adopted.

(9) The maternal mortality is increased. The infant mortality is markedly increased.

(10) As might be expected, is noted the large number of anacephalic monsters.

(11) There is not a greater number of torn perineum than would be expected from an equal number of operative deliveries for other causes.

VITAMIN THEORIES.

The essential experimental facts about the functions of the best known vitamins have become sufficiently familiar to justify the belief that these newly recognized food factors furnish something of importance in a human diet. Holt¹ recently summarized the service which the newer knowledge has rendered by pointing out how it has

¹ Holt, L. E.: The Practical Application of the Results of Vitamin Studies, J. A. M. A. 79:129 (July 8) 1922.

helped to place the whole subject of nutrition on a better scientific basis. The experimental has been substituted for the empiric method in determining the value of the different foods. Formerly we might know that certain foods were desirable and necessary; now we are often able to say why such is the case and to determine their precise value in nutrition.

The study of vitamins has helped to make clearer why a variety of foods is so essential to well being, and how danger may follow when diet becomes restricted from either necessity or caprice. Decrying the indiscriminate use of alleged vitamin-bearing preparations as popular therapeutic agents, Holt further utters the warning that until they have been confirmed by adequate clinical experience there is some danger in relying too much on the results of laboratory observations on animals of a different species whose physiologic needs may be different from those of human beings. In a somewhat similar strain, Mitchell² has asserted that in the total lack of quantitative data on the vitamin requirement of man, and in the general absence of malnutrition or disease among people in this country which can with any degree of probability be diagnosed as involving vitamin deficiencies, it seems premature to formulate recommendations for the balancing of diets with respect to vitamins. It is pointed out that the classic experiments are conducted in each instance on species peculiarly susceptible to the particular deficiency under investigation. However, this sort of criticism is a conventional one in medicine. While admitting the background of truth in it, we must recall that the clues furnished by animal experimentation have led to so many helpful avenues of information that it would be scientific folly to fail to heed them, even in our as yet inadequate understanding of the possible bearing of vitamins on human welfare. There is no necessary conflict between an open mind and conservatism in scientific judgment. Hence we are glad to reiterate the warning of Mitchell, when he writes:

"At a time when popular periodicals are widely publishing irresponsible articles on vitamins, ignorantly or deliberately creating an entirely dis-

torted popular conception of them, and when commercial concerns are widely advertising purely hypothetical advantages of vitamin preparations, it is particularly important that investigators in nutrition exert great care in the wording of statements as to the practical significance of vitamins in every day life. Otherwise they may become unwillingly accomplices in the perpetration of a gigantic fraud upon the American public."

It is in harmony with such conservatism of statement, we believe, that the recent report of the Council on Pharmacy and Chemistry of the American Medical Association on yeast preparations has been formulated.³

With so much uncertainty still admitted, it might seem futile to discuss at this time the theories of the mode of action of vitamins. However, the history of science attests that its development has more often been promoted rather than retarded by the leavening influence of hypotheses. Most investigators of the vitamins have looked on them as functioning somewhat as hormones are supposed to act in the organism, namely, as stimulants to certain physiologic mechanisms. Others have imagined the newly discovered factors to be essential components of some, at least, of the living tissues; thus they would be quite as indispensable as are other structural units of the body, such as certain amino-acid groups, calcium, phosphorus or iron. A further group of students has assumed the vitamins to be primarily catalytic in function, thus behaving like the well known enzymes. Hess⁴ of Zurich has lately offered somewhat indirect evidence that the antineuritic vitamin, which relieves the symptoms of polyneuritis in animals fed on diets devoid of vitamin B, contributes in some way to the production of oxidative enzymes in the body. Studies in vitro on the tissues of polyneuritic pigeons indicated to him a decrease in the oxidative enzymes usually found in well nourished animals. On this hypothesis the avitaminosis is an expression of poverty of the cells in the factors that facilitate tissue respiration. This is one of the many guesses which the future will need to evaluate in the physiology of vitamins. —*Jour. A. M. A.*, July 29, 1922.

² Mitchell, H. H.: The Necessity of Balancing Diets with Respect to Vitamines, *Science* 56:34 (July 14) 1922.

³ Yeast Preparations, New and Nonofficial Remedies, *J. A. M. A.* 79:135 (July 8) 1922.

⁴ Hess, W. R.: Die Rolle der Vitamine im Zellchemismus, *Ztschr. f. physiol. Chem.* 107:284 (Dec. 21) 1921.

CASE REPORTS

CITY HOSPITAL.

F. L.—Four years of age, admitted to hospital July 26, 1922, for a rash of undetermined origin. Taken sick July 25, 1922, with fever, sore throat cough and vomiting, rash appeared July 26.

On admission, temperature 105.4, pulse 160 and respiration 38. Child in coma, with twitching of muscles and purpuric rash over whole body. Pupils widely dilated, not reacting to light, with right internal strabismus. Fauces reddened, no exudate nor membrane. Neck rigid, K. J. increased, Babinski present, no Kernig sign.

Lumbar puncture done and 40 cc. milky spinal fluid removed under marked pressure. Twenty cc. antimeningitis serum given, intrathecally, 20 cc. intramuscularly, and 20 cc. intravenously. Meningococci demonstrated in spinal fluid. During the first 30 hours, antimeningitis serum was given every six hours, intrathecally and intramuscularly, and during the next thirty hours, intrathecally, then given every twelve hours until the eleventh day, when the spinal fluid became clear, and examination showed no meningococci. Patient received 300 cc. serum intrathecally, 110 cc. intramuscularly and 20 cc. intravenously. Marked opisthotonus persisted for ten days, strabismus and dilated pupils for the same period, headache and vomiting persisted for sixteen days, when the patient began to eat well and recovered rapidly, being discharged well on the 38th day.

A TYPICAL CASE OF TETANUS.

A. I.—Twelve years old, referred to hospital for tetanus. This patient on May 31, 1922, while playing in a stable received a puncture wound of the right foot. This was treated daily. Patient complained of pain in foot and leg. Eight days after the injury patient went swimming and complained of pain in back and neck, jaws became set and could open them only enough to admit tip of finger. Became irritable, developed difficulty in talking, was annoyed by bright light and noises. When disturbed, all muscles were thrown into state of contraction, remaining in spasm for several minutes, the muscles most affected being the abdominal group and the masseters, body bathed in cold perspiration, and facial expression typical risus sardonicus. Tetanus antitoxin 10,000 units

given intrathecally, intramuscularly and intravenously. During the first five days received 150,000 units, when he began to improve. Trismus and stiffness of abdominal muscles persisted 12 days. Discharged well 22 days after admission.

HARMON P. B. JORDAN, M.D.

HOSPITAL NOTES

CITY HOSPITAL.

The regular meeting of the Staff Association was held on Wednesday, September 20th.

On October 1st, Dr. Frank V. Garside and Dr. John Champlin, Jr., finished their service and began services at the R. I. Hospital.

MISCELLANEOUS

THE GORGAS MEMORIAL FUND.

At the St. Louis annual session the Board of Trustees reported to the House of Delegates that in response to a request received from the directors of the Gorgas Memorial Institute of Tropical and Preventive Medicine for the co-operation of the American Medical Association, the Board had taken action which resulted in the appointment of a committee, representing the American Medical Association, to act on the project. The following were appointed: Dr. George E. de Schweinitz, Philadelphia; Dr. Charles W. Richardson, Washington, D. C., and Dr. Fred B. Lund, Boston.

The House of Delegates unqualifiedly endorsed the Gorgas Memorial as a tribute to a past president of the organization and one of its most distinguished and loved members. At its recent meeting the Executive Committee of the Board of Trustees received the following statement from the committee and directed its publication.

STATEMENT AND APPEAL FOR CO-OPERATION.

As a result of the stimulating suggestion of President Porras of Panama, it has been resolved that a fitting memorial shall mark the humanitarian service of the late Major General William C. Gorgas, and the beneficent influence of his life and work on mankind throughout the world. Following the thought of President Porras, it has further been decided that this memorial shall take the form of a scientific institute for the study of tropical diseases and of preventive medicine.

No better place could have been selected than Panama City, the gateway between the Atlantic and the Pacific, where General Gorgas' well-planned and executed work made possible the building of the Panama Canal.

It is hardly necessary to call the attention of the medical profession to the far-reaching effects of General Gorgas' work on the welfare of the people of the whole world, especially in tropical and semi-tropical climates, and in all places subject to the inroads of infectious disease.

We of the medical profession remember him as our surgeon general during the early part of the World War. We remember his prompt recognition of the necessity of bringing into active service large numbers of physicians and surgeons from civilian life. We remember his genial and kindly nature, his high character, and his steadfast effort directed toward the organization and equipment of the Medical Corps of the Army. We remember the patriotic response. We remember him as a great sanitary officer, to whom we wish to pay a lasting tribute.

A central committee has been formed, with Admiral Braisted, retired, ex-president of the American Medical Association, as its president. The American Medical Association has appointed a committee of three to work in accord with the central committee, and through its members this appeal is made to the American medical profession.

The plan is to build at Panama an institute for the study of tropical and infectious diseases, with a hospital, laboratories, departments for research and all other facilities required in an institute of this character, erected and administered according to the most progressive, modern ideals. The Panamanian government, owing to the far-sighted, philanthropic vision of President Porras, has donated the great Santo Tomas Hospital, and also the ground on which it is proposed immediately to construct the buildings as they have been described. Dr. Strong has been appointed the scientific director.

In conjunction with this work in Panama, there will be established in Tuscaloosa, Ala., the Gorgas School of Sanitation, for the purpose of training country health workers, sanitary engineers and public health nurses, especially educated to deal

with the problems peculiar to the southern States.

An endowment of six and one-half million dollars will be required to enable the institute to carry on the work according to the plans which have been formed.

The Republic of Panama has demonstrated its sympathetic and practical interest in this enterprise with splendid liberality. The physicians of our country, and especially the members of the American Medical Association, surely will not disregard the memory of a former president, and will seize the opportunity to make in this respect a contribution of which they will be proud.

The campaign for funds is to be international. A large response is expected from North, Central and South America, since the nations of these countries have been the chief beneficiaries of the labors of General Gorgas. It is fitting that his co-workers of the American medical profession should be requested to respond generously to this appeal. It is hoped that every member of the American Medical Association will make as liberal a subscription as possible. Any sum will be gratefully received. Checks should be drawn to the order of the "Gorgas Fund" and should be mailed to the American Medical Association, 535 North Dearborn Street, Chicago.

CHARLES W. RICHARDSON,

Washington, D. C.

F. B. LUND, Boston.

G. E. DE SCHWEINTZ, Philadelphia.

PROVISIONAL MORTALITY FIGURES, 1922.

Washington, D. C., August 30, 1922.—The Department of Commerce announces that provisional mortality figures compiled by the Bureau of Census for the first quarter of 1922 indicate higher death rates than for the corresponding quarter of 1921. For the States compared, the death rate for the first quarter was 13.7 in 1922 against 12.6 for the first quarter of 1921. The highest mortality rate for the quarter is shown for the District of Columbia (17.6) and the lowest for Wyoming (9.6). These early figures forecast for the year 1922 a higher rate for the death registration area than the record low rate (11.7) for the year 1921.

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ORIGINAL ARTICLES

OBSERVATIONS ON CANCER OF THE UTERUS.*

LINCOLN DAVIS, M.D.

BOSTON, MASS.

Doctors are undoubtedly heartily sick of papers and talks on the subject of cancer. The conscientious doctor, however, is still more heartsick when confronted by the reality itself as represented by the average case as it presents itself at his office in a state of hopeless advancement. As long as the problem remains with us, and it appears to be more pressing each year, we must study it, talk about it, and fight it relentlessly, in the profession and out, until some day, let us hope, it will be solved.

Surgeons, roentgenologists and radiologists are all contending against this enemy of the human race with increasing intensity. All are clamoring for the early recognition and treatment of the disease, and with this end in view a nation-wide and almost world-wide campaign is being carried on among the people and in the profession. The laity is being made acquainted with the early signs and symptoms of the disease, and the medical profession, which is far from blameless in overlooking the early stages of this insidious malady, is also receiving its due quota of admonishment as to the costly results of hasty and superficial physical examination, or worse still, lack of examination.

The surgical clinics of this country are crowded with cancer cases, and the more experienced hospital surgeons are devoting many hours a day to difficult, tedious and critical operations in the attempt to thoroughly eradicate deep-seated new growths with their tributary lymphatic drainage areas. Almost as many exploratory laparotomies are being done and the abdomen closed without even an attempt at removal of the growth, on account of its widespread dissemination. I do not mean to criticize the procedure of exploratory laparotomy, quite the reverse, I believe in it thor-

oughly, but it should be resorted to at an early stage on the suspicion of malignancy, when there is hope of cure. I only deplore the frequency with which inoperable carcinoma is found.

At the Massachusetts General Hospital in the year 1919, there were 348 operations performed for carcinoma of various organs. In the year 1920, 432 cases of malignant tumors entered the wards for treatment. How many of these cases have been benefited by their operations? How many will be cured? We do not know.

At times the surgeon is assailed by a feeling of overwhelming discouragement, when after an apparently most radical and thorough eradication of some deep-seated cancer, with immediate recovery of the patient, and gratifying cessation of previous distressing symptoms, at the end of six months unmistakable signs of recurrence appear. When this is repeated several times, we sometimes ask ourselves, what is the use? On the other hand, to those who have had the care of cases of unoperated cancer to the bitter end, and very few surgeons have this soul-trying experience; to those who have stood by and watched the slow wasting, the pain, the hemorrhages and the foul discharges, using merely palliatives and morphine to tide the case along, to such I am sure, almost any other way seems preferable.

There is, however, a brighter side to the picture. Radical surgical removal of deep-seated cancer yields a definite percentage of really permanent cures, varying with the locality affected, but sufficient to spur the surgeon on to further efforts. In organs where the development of new growths is subject to detection by sight and palpation, as in the female breast, where consequently it is possible to get cases at an early stage, surgical operation gives most excellent results. Recent figures reported before the meeting of the American Surgical Association last May showed approximately 60 per cent of five-year cures where the cancer was confined to the breast at the time of operation. Cancer of the lip gives perhaps even better figures.

Cancer of the uterus, too, should be detectable at an early stage in a large number of cases. The cervix is accessible to palpation and inspection by

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the simplest of methods. The symptoms are often fairly distinctive and yet the early detection of cancer of the cervix remains a rarity.

According to the mortality records of the United States, about 12,000 women died of cancer of the female generative organs in 1914. Of these cases, cancer of the uterus makes up at least 90 per cent. Inasmuch as there is an estimated annual increase in the death rate from cancer of about $2\frac{1}{2}$ per cent, it is fair to assume that at the present time at least one thousand women die every month in the United States as a result of cancer of the uterus.

For every case that ends fatally, at least one new case is developing, hence one thousand new cases of cancer of the uterus are developing in the United States every month. It is these new cases which concern us. How are we going to detect them, and how treat them?

I regret that I cannot accurately describe to you the precancerous cervix. There are certain conditions of the cervix which are generally considered to predispose to the development of cancer and this is undoubtedly so. Cases with deep indurated lacerations of the cervix, with eversion, and ectropion, which bleed on touch, are generally regarded with suspicion, and a plastic operation or amputation advised, especially if the patient is nearing the menopause. Such advice is sound. The practice of repairing lacerations may of course be carried to absurd lengths, for every woman who has borne a child has a lacerated cervix, which may be the potential site of cancerous degeneration. Common sense and good judgment are required here as in everything else. A cervix which is suspicious might at least be kept under observation and be inspected three times a year. While the precancerous cervix still remains *terra incognita*, there are certain definite clinical manifestations in some forms of early squamous cell carcinoma of the cervix. A granular area with definite margin which is distinctly elevated above the surrounding tissue, which is hard to the touch, and bleeds easily, especially if it is confined to one lip, is very suspicious. On the other hand the inverting type of adenocarcinoma of the cervix may honeycomb the entire structure with little or no external manifestation.

Two cases have recently come to my attention, in which the surgeon who first saw them in the Outpatient Department, made a tentative diagnosis

of cancer of the cervix. They were admitted to the wards under the charge of other surgeons. Both were curetted, and specimens of tissue excised from the cervix for microscopic examination, in one case a trachelorrhaphy being done. In both cases the pathological report was negative. The patients were discharged without further treatment. In one case at the end of a year there was unmistakable cancer of the posterior lip of the cervix, which was, strange to say, still well localized. A complete hysterectomy was done. Microscopic examination of the uterus showed typical early squamous cell carcinoma of the cervix. The patient made a good recovery and is well up to date. In the other case the outcome was less fortunate, the patient re-entering the hospital within six months, with hopelessly advanced carcinoma involving the parametrium and wall of the pelvis.

How are such occurrences to be explained? The microscopic sections obtained at the primary entries were reviewed in both cases, and showed no carcinoma. We can only say that the site of the disease was missed in the removal of the specimens. This may easily occur when the disease begins in a small isolated island of tissue. The closest co-operation between surgeon and pathologist is desirable, the latter should see the specimen cut and be familiar with its relations in situ. In the case of curettings all the tissue should be saved and examined.

I firmly believe that the clinical presumption of early malignancy is often sufficient to warrant a complete hysterectomy whether abdominal or vaginal, irrespective of the microscopic findings. A woman who has passed the menopause by a year or two and then suddenly begins to flow, should surely have the uterus removed even if curettings are reported normal.

When two such failures in early diagnosis as have just been recorded occur in a large, well equipped metropolitan hospital, it disarms such criticism of the solitary general practitioner who often is forced to make his examinations under protest, in a poor light, and occasionally lets a case slip by. Such slips should spur us all on to greater watchfulness and care.

Sometimes we are confronted by some such attitude as this on the part of a physician who may say, "What is the use of making an early diagnosis anyway, surgery has never accomplished a cure,

that I know of, and the longer the patient may remain in ignorance of her real condition, the better for her."

In order to get physicians to cordially co-operate with surgeons in the early detection and treatment of cancer of the cervix it is up to the surgeon to show that the results of operations are really worth while.

Twenty years ago there was much complaint on the part of surgeons in regard to late diagnosis of acute appendicitis, it being rightly held that the bad results of operations were really due to delay. This has been amply proved and accepted by the profession, so that today there is little cause for complaint on this score, and often the surgeon is urged to operate by his more radical medical colleague while he is still assailed by doubts as to the diagnosis.

Now what results may reasonably be expected in the surgical treatment of cancer of the uterus? There is little difference of opinion in regard to the treatment of adeno-carcinoma of the body of the uterus. This disease remains localized in the uterus for a comparatively long time. When it does metastasize, it usually does so by breaking through the peritoneal coat of the fundus and invading the general peritoneal cavity, giving unmistakable evidence of its presence. The results of total hysterectomy are excellent. The operation is comparatively simple and safe, the parametrium does not require removal, and the ureters may be left undisturbed, nor is it necessary to remove a cuff of vaginal wall. The primary mortality is low and the percentage of five-year "cures" in the neighborhood of 75%.

When it comes to cancer of the cervix the situation is quite different. Unfortunately this condition is much commoner than cancer of the body, being found six to eight times oftener than the latter. There is at the present time a great divergence of opinion as to the best treatment. There is a distinct trend of opinion just now in favor of radium treatment as opposed to operative treatment. Personally, I cannot as yet share this view. I will admit that I am not competent to express an opinion as to the value of radium in the cure of cancer of the cervix. I have personally not happened to see a single definitive cure by radium as yet. I would not, however, deny that such exist.

Hitherto the cases referred for radium treatment have been generally the most advanced and hopeless cases in which it is perhaps not fair to expect a cure. There have been some very remarkable palliative effects, which are indeed a hopeful sign for the future. It is only within the last two or three years that radium has been used in a scientific and intensive manner for this disease, and it is still too soon to judge of end results. By its encouraging results in advanced cases radium has undoubtedly earned for itself the right to a fair trial alongside of surgery in the more favorable cases. It is obviously unfair to refer for treatment by radium only hopelessly advanced cases while retaining all early cases for surgical treatment. The employment of radium, however, in all locally favorable cases in which there are contra-indications to surgical operation on the part of the general system of the patient, should provide in due time ample means for a fair comparison of results obtained by both procedures. I must confess that I am unwilling as yet to abandon the operative treatment of this disease in appropriate cases until more evidence of lasting cures by radium are at hand. The radical operation has proved itself of real curative value in the past and is, I believe, capable of a still better record in the future.

My experience with the operation at the Massachusetts General Hospital comprises 35 cases operated on during the last ten years. Total abdominal hysterectomy, including a liberal cuff of vaginal wall and wide removal of parametrial tissue is the operation of choice. This has been done in 34 cases. Systematic dissection of the pelvic lymph nodes has not been attempted. Ligation of the internal iliac arteries has not proved in my hands to be of material advantage, and has been given up since the early cases. In cases presenting a bulky cauliflower out-growth from the cervix, filling the vault of the vagina, preliminary curettage and cauterization followed ten days later by radical hysterectomy has been done. Otherwise the operation is done in a single stage without cauterization or curettage of the growth.

Simple curettage and cauterization, or cauterization combined with ligation of internal iliac, and ovarian vessels, has been done in a number of cases in earlier years as a palliative measure, but

lately has been entirely abandoned in favor of radium in those cases in which radical operation is contra-indicated.

Vaginal hysterectomy has been done in a single case in which the disease was discovered at an early stage and seemed to be entirely confined to the cervix. This procedure is not advocated except under unusual circumstances.

In the total of 35 cases of hysterectomy for cancer of the cervix, 34 radical abdominal operations and one vaginal hysterectomy, there have been three operative deaths, an operative mortality of 8.5%. There has been no mortality in the 15 cases operated on since 1917. The operability rate has been approximately 35%. That is, about one in three cases seen, has been proved suitable for this operation.

Last May I looked up the results of all my cases in which a radical operation had been done, in which a period of five years had elapsed since operation. I will quote from the report: "Total number of cases, 20. Nineteen radical abdominal hysterectomies and one vaginal hysterectomy. All 20 cases have been traced.

"In 3 cases, death occurred as an immediate result of the operation, giving an operative mortality of 15 per cent." This percentage has been reduced by subsequent cases to 8½%.

"In 7 cases the patients are now living and well more than five years after operation.

"In 1 of these cases more than 10 years have elapsed since the operation.

"In 1 case the patient died of cerebral hemorrhage without sign of recurrence seven years after operation.

"This gives a total of 8 five-year 'cures,' or 40 per cent.

"Recurrence of disease has been noted in a total of 9 cases; it took place within one year of operation in 7 cases.

"In 1 case recurrence was first noted 2¾ years after operation.

"In 1 case reported well by letter four years and four months after operation, local recurrence was noted at the end of the fifth year. The patient died five years and ten months after operation.

"All recurrences in these cases were local in the pelvis, except in one where the stomach and liver were stated by the attending physician to be the site of recurrence.

"One case classed as a 'cure' in which death from cerebral hemorrhage occurred seven years after operation, might be objected to on the ground that the cerebral condition was in the nature of a recurrence. The fact that the patient had been repeatedly examined during the first five years and found free from recurrence, and that her cerebral attack occurred very suddenly during apparent good health, and finally that there had been a previous hemiplegia prior to operation, amply justifies, I think, the exclusion of recurrence as a factor in this case. If the three-year period of freedom from recurrence is taken as a standard of 'cure,' the percentage would be raised only five points to 45 per cent.

"The most gratifying evidence of the efficacy of the radical abdominal operation is furnished by two cases in which microscopic examination of the specimens removed showed definite infiltration of epidermoid cancer into the tissues of the parametrium, yet the patients remain well more than five years after operation."

It is now my painful duty to state that one of the cases herein recorded as a five-year "cure" has since re-entered the hospital with symptoms of precordial distress and dyspnoea. The X-ray reveals a shadow in the mediastinal region suggestive of new growth. The abdomen and pelvis is clinically clear of disease. It is probable that this is a recurrence of the disease in the mediastinum. If such is the fact, the percentage of five-year "cures" is reduced by 5 per cent. It is a discouraging outcome of what seemed a great success. It simply goes to prove what is already well known, viz., that no period of freedom from recurrence guarantees a permanent cure. Recurrence may take place after periods of ten to fifteen years and more, yet in this case five and one-half years of absolute good health is certainly well worth while.

In summing up, then, the status of the radical operation for cancer of the cervix it can fairly be claimed that in an average surgical clinic about one-third of the cases are suitable for operation. The operative mortality should not be over 8½ per cent, and in some hands would doubtless be found to be under 5 per cent. Five-year "cures" can be obtained in about 40 per cent of cases operated on. If by education of the public and stimulation of the profession, cases could be brought to the surgeon at an earlier stage of the disease, far

better results than these in rate of operability, primary mortality, and number of definite cures could be confidently predicted.

There is ample pathological evidence that cancer is a local disease in its early stages. There is a stage in which cancer of the cervix is still confined to the uterus, just as there is when cancer of the breast is confined to the breast, and cancer of the lip to the lip. If in such cases of uterine cancer the entire organ is removed, cure is the logical result.

Let us all then exert our utmost efforts to find these cases and institute prompt treatment whether by operation or radium, at a time when there is a real chance of eradicating the disease.

ENCEPHALITIS LETHARGICA AS A COMPLICATION OF PREGNANCY, REPORT OF A CASE.

BY ANTHONY CORVESE, M.D.
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Beginning with the report of von Economo¹ from Vienna in the spring of 1917, there began to appear in medical literature disquieting accounts of a nervous disease of great virility and of unknown origin. It very soon became evident that it was of world-wide distribution; it was reported from every continent.

Because this disease predominately affected the brain and caused hypersomnia, von Economo gave it the name of encephalitis lethargica. It was the "sleeping sickness" which the lay public regarded with curiosity and alarm.

The views of the profession with regard to the true nature and etiology of the encephalitis lethargica were varied and entirely speculative. In England opinion was so far astray that for some time the disease was thought to be botulism.²

At the present time the etiology is still unknown but many facts of pathology have been cleared up by research which facilitate diagnosis and indicate lines of treatment.

The facts are these: encephalitis lethargica is an inflammation of the nervous system; its virus attacks not the brain alone, but is responsible also for encephalomyelitis, polyneuritis, and meningo-encephalo-myeloneuritis.³ The most startling fact, however, although its implications are not yet un-

derstood, nor entirely verified, is that there is reason to believe that the virus of influenza is responsible for encephalitis lethargica and allied inflammations of the nervous system. The relation between influenza and certain pathological features of encephalitis lethargica were quickly noted and as Jelliffe⁴ states it: "Practically all the neurological syndromes of influenza have been observed or described as types of complications of lethargic encephalitis."

An examination of American and English literature extending over the period of the epidemic of encephalitis lethargica reveals that although men were attacked more frequently than women, yet the mortality is always higher among women, and and the mortality among pregnant women appears to be unusually high.⁵

At the close of the year 1920 only eight cases of encephalitis lethargica as a complication of pregnancy had been reported in the literature of America and England and the literature of all languages up to the present day contains reports of less than twenty cases. Banister,⁶ writing in the spring of 1921 to report a case, states that he had seen no references at all to encephalitis lethargica occurring in pregnancy.

In order of date, the following reports give interesting data:

Harris,⁷ writing in the London *Lancet* in April, 1918, says:

"A young woman who was pregnant almost at term, ate heartily of tinned salmon March 28. The following morning she developed diplopia, bilateral ptosis, marked drowsiness and pyrexia up to 103° F. She was delivered April 2, without influence on the course of the disease, which had continued with double third nerve paralysis, drowsiness and pyrexia of 100° F., retention of urine and increasingly active delirium. Examination of the suspected food had shown a large gas-producing anaerobic gram-positive, probably spore-bearing bacillus which has not yet been identified." Harris does not state the outcome of the case nor the fate of the child.

Duncan's² case is reported with meager detail: "A married woman, several months pregnant, who had been ill a few days, was when first seen, sitting by the fireside with both eyes closed. She was dull, but spoke when addressed and could raise

the eyelids." The outcome of this case, as regards the subsequent history of the mother and child, is not given by Duncan.

Bassoe⁸ reports his case as follows:

"A woman of 34, the mother of eight children, in the sixth month of pregnancy was attacked by epidemic encephalitis. Five weeks after the onset pulmonary edema developed and the patient died. She was not delivered. Necropsy revealed extensive petechial hemorrhages in the visceral pleura, the epicardium, the renal pelvis, the bladder and the stomach in *both* the mother and the fetus."

Sachs⁹ in a series of seven cases had three fatalities, two of which occurred in pregnant women. In his report, the duration of pregnancy is not stated for either case. Both cases are dismissed with briefest reference. It is stated that both presented ocular symptoms, the lethargy and the ataxic and cerebellar symptoms and both were very toxic. In both cases, the duration of illness was two weeks. The question of inducing abortion was raised but dismissed. No further details are given by Sachs.

Putnam's¹⁰ case had had two previous normal pregnancies and her present pregnancy was normal also. She was delivered three weeks after the onset of her illness. She did not rouse during a four-hour labor. The child was still-born; its heart had not been heard the whole day previous. Four days after the delivery, the patient died.

Neal's¹¹ case is described as follows: A woman of 25, who was five months pregnant, had an attack of influenza two weeks before the onset of encephalitis, which began gradually with headache, chills and fever, vomiting, sweating and delirium. The spinal fluid showed great increase in cells and protein, Wassermann test was negative, as was also guinea-pig inoculation for tuberculosis. Her condition remained the same for two weeks or more. She gradually recovered, the facial paralysis cleared up and she had a normal delivery at term.

The case reported by Schulze⁵ is that of a woman of 35; the pregnancy was one month past term. On April 30, she was delivered of a child weighing ten pounds. The onset of encephalitis had occurred about a month before the patient was seen. Twenty-six days after delivery, the patient suddenly developed symptoms of pulmonary embolism and died twenty minutes later. The fate of the child is not mentioned.

Garnett¹² reports the following case:

The patient, a secundipara, 26 years old, had a fairly typical attack of lethargic encephalitis when she was eight months pregnant. The pregnancy was normal in every way. The patient went through a normal delivery in two hours and had no undue bleeding afterwards. The child was a normal infant weighing 6½ pounds. The puerperium was perfectly normal, with no fever and no pain. Although the milk was scanty, the mother tried to nurse the child.

She had no inclination to void and there was apparently a partial paralysis of the bladder. The only sequelae were an occasional hallucination and some pain in the legs. The particularly interesting part of this case, is the apparently painless labor and the partial paralysis of the bladder, indicating that there may have been some destruction of the posterior nerve roots simulating *tabes dorsalis*.

Brown¹³ emphasizes the difficulties of diagnosis where encephalitis complicates pregnancy near term. The case reported by him was not correctly diagnosed until the day before the patient's death, although the onset occurred a month earlier, at two months' pregnancy. The patient was delivered by the classical Cæsarian section at the urgent request of the family (for no other reason). Apparently the syndrome did not resolve itself into a picture of encephalitis until the diagnosis was made; or it did not present itself to the minds of the consulting physicians, as a possibility as in this case, several diseases were mistakenly suspected until the correct diagnosis was given and with it the prognosis which was immediately recognized as inevitable death.

Banister's⁶ patient was a primagravida, 31, in the 36th week of pregnancy when the onset of encephalitis occurred. This case showed distinct Parkinsonism. There was a definite list to the right side; in certain respects it was symptomatic of paralysis agitans—the tremor, mask-like expression, increasing reflexes and monotony of speech. The pregnancy was terminated by induction on the 16th day of disease. The child was perfectly healthy. The pains were insidious and very effective. The child was delivered nearly four hours after induction. The patient's mental state improved after the delivery of the child, but it was a short-lived improvement, as she died three weeks

from the onset of the disease. *The whole course was afebrile except for a slight and temporary rise to 100°.* Induction of labor was decided upon in view of the following data. The patient's condition was becoming worse; the baby was alive and it was hoped that the removal of the fetus might influence the patient's metabolism for the better. The very definite improvement for the first 36 hours after delivery gave rise to great hopes of recovery, but the experience of this, according to Banister's opinion, leaves the question of interfering with pregnancy *subjudice*.

In Haultain and Thornton's¹⁴ case, pregnancy seemed to be unaffected by the disease, but the lethargy was exaggerated for the first few days after labor and especially for the first 24 hours. The patient slept through the first stage of labor without giving any sign that labor was in progress and the end of the second stage was delayed on account of defective expulsive efforts. The third stage was normal in every respect and no excess of blood was lost. The puerperium, except for the conditions noted, was uneventful; the uterus underwent normal involution. The child was quite healthy and showed no signs of drowsiness or oligopnea at birth or after.

Pollastroni¹⁵ reports three cases from the Bologna maternity, two of which died. One was delivered by classical Cæsarian Section, one spontaneously, and in the third labor was induced. In all three the babies were premature and died from one to eleven hours after birth. The case in which labor was induced improved after uterus was emptied, but this was of short duration, as the patient went into coma the following day and died. This corroborates Banister's opinion about the question of interfering. Pollastroni classified his cases as three types: 1st "electrical chorea type," 2nd "typical lethargic type," and 3rd "grand chorea type."

From the reports it may be said that pregnancy renders graver the prognosis of encephalitis, and that the influence of the malady upon the fetus and gestation is not different from other acute febrile diseases. Interference should not be done except as a last resort to save a viable child.

I have briefly summarized the data from American and English literature in order to arrive at some conception of the influence of pregnancy on encephalitis and vice versa. The reports reveal that mortality is high for both mother and child.

My own case presents some interesting features and I record it in full detail:

The patient, Mrs. J. E., a primigravida of 24, in the 29th week of pregnancy, was first seen on March 24th, 1921, for antenatal examination.

History: Family history: Mother died six years ago from "psychosis." Father living, well. Three sisters living, well. Patient has had no serious illness except usual child diseases. Catamenia began at thirteen and was always regular and normal. *Present History:* Married eight months, and pregnant for first time, last catamenia September 10th, 1921; labor due June 17th, 1922. She had moderate vomiting during early months of pregnancy and slight headache for past few days; bowels regular; no other complaint.

Examination: Patient is well developed and well nourished, pupils equal and reacted to light and distance, heart and lungs negative; abdomen, uterus 8 cm. above umbilicus, vertex presentation, fetal heart left lower quadrant. Pelvic measurements, interspinous 25, intercrystal 28.5, external conjugate 20.5, true conjugate 11.5. Extremities, K. J. pr=, no edema. Blood pressure 130/85. Urine Sp. G. 1021; negative for albumen and sugar. She was placed on a low protein diet and advised to report within a week.

On March 28th I was called to patient's home. She was in bed, complaining of rather severe headache, heaviness about the eyes, pain in ears and dizziness when she raised herself in bed. These symptoms had started three days ago and were rapidly increasing in severity. Examination revealed the following positive signs: Temperature 100, pulse 90, blood pressure 124/90. Face slightly flushed, slight congestion of eyelids, ear drums negative, considerable hyperesthesia of ear lobes, especially right one, slight redness and congestion of pharynx and tonsils. Heart and lungs negative; constipation was marked throughout course of the disease. Urine somewhat concentrated but negative for sugar and albumen. In spite of normal blood pressure and urine examination, a tentative diagnosis of toxemia of pregnancy was made. She was advised to stay in bed, and was ordered colonic irrigations and milk diet.

For the next four days the temperature ranged between 99.2 and 101.8, pulse between 96 and 120. During this time she complained of dizziness, severe pain in ears, sleeplessness, and was very ner-

vous. On March 30th she stated that during the night she had an "electric shock" from her feet to her head. Urine negative, B. P. 126/84, W. B. C. 11,500. Blood urea normal. The pain in ears was so severe that I called an otologist for consultation and he reported the ear drums normal; fundi also normal.

April 2, 1922. Photophobia quite marked, very restless, some mental confusion. On account of repeated negative urine, examination and normal blood pressure, I was convinced that this was not a case of pure toxemia of pregnancy. I thought of some mental disturbance (because of mother's history) or some inflammatory condition of the brain.

April 4th. Diplopia developed. April 5th, temperature for past five days between 99.6 and 98.6. Pulse 84-96. The condition of nervousness now changed to lethargy. For next three days patient slept most of the time.

April 9th. During night she noticed defect in her speech (stuttering). I now made a probable diagnosis of encephalitis. Blood Wassermann negative.

April 10th, consultation with Dr. Chas. A. McDonald. The following is Dr. McDonald's examination:

Cranial Nerves: Olfactory and Nose: No disturbance in smell, and nasal passages normal. Second, Third, Fourth, Sixth and Eye: The upper part of the right disc is cloudy, otherwise disc fields and vision are normal. Pupils are equal and react to light and distance. Right sixth appears weak, left eye cannot close. No ptosis. Fifth and Mouth: Motor and sensory normal. Teeth and gums in good condition. Seventh: Facial paralysis of the left side of the peripheral type. Ninth, Tenth and Eleventh: Normal. Twelfth and Tongue: Tongue deviates to the right, and moderately coated.

Motor System: No paralysis, no atrophies, and no involuntary movements. Deep and superficial reflexes are normal and no abnormal ones. Slight speech impediment, otherwise skilled acts are normal. There is no co-ordination. Patient was in bed.

Sensory System: There is complaint of parasesthesia of the left hand and no other disturbance in the sensory system. *Mental:* Except for lethargy, no abnormal signs. *Laboratory:* Blood Wasser-

mann was negative. Spinal fluid was also negative. There was no increase in cells.

Diagnosis: Encephalitis lethargica. April 18, feeling better, speech defect and facial paralysis less marked. Although temperature had been normal for over a week, the patient was kept in bed for fear of respiratory paralysis. April 26th, the patient went into labor about 4 p. m. and after easy labor was delivered at 7 p. m. of a 5½-pound female child. The baby was apparently normal in every way. The patient had an uneventful puerperium, rapidly improved and by the third week of puerperal state the only residue was slight speech defect. At the time of writing, the patient is perfectly well, no diplopia, no speech defect, the only complaint is of an occasional slight headache. The child is doing well.

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Meets the first Thursday in September, December, March and June

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EDITORIALS

THE MENTAL HYGIENE MOVEMENT.

The latest and in some respects the most important movement for the betterment of the public health is that known as mental hygiene. Inaugurated by a layman who himself had passed through the shadows of mental alienation and who therefore was possessed of that living sympathy for his fellow sufferers which comes of the sharing a common experience, mental hygiene has enlisted the interest and, what is more to the point, the support of men and women in all walks of life.

And thus has been added one more limb to the already flourishing tree of preventive medicine.

When the study of mental disorders and of nervous conditions resulted in nothing more important than the labelling of patients with this or that name, usually of greek derivation, it is not surprising that psychiatry and neurology moved in circles which although they may have been, as Aristotle thought, the most perfect of figures, yet suffered the defects of all circles in that they lacked the kind of direction which makes for progress. Since furthermore medicine always takes its inspiration and many of its categories from the

reigning philosophy, and since the philosophical *milieu* of the old psychiatry and neurology was, for the most part, static, the natural result was that the efforts of our forefathers concerned themselves with the description of those "disease entities" and the construction of those marvelous clinical classifications on the iron frame-work of which they were wont to stretch their patients. All this was in its time and place of value, and for it we should be, as indeed we are, sufficiently grateful. But it had served its purpose and so with the introduction of the conception of evolution and of the comparative method into medicine it was realized before long how inadequate to the facts were the older formulas and the existing methods of approach to mental problems. If the study of bodily development was, as it proved to be, so fertile in results, why not also the study of mental development? If a knowledge of structure and of growth was a good thing for anatomy and physiology, it should be a good thing for psychology. And so it has come about that the investigation of mind from its beginnings and from within has replaced its description from without. We have to do in mental matters with no mere Lockian *tabula rasa*, passively reflecting an external world; rather are we dealing with a living structure, a moving equilibrium, attempting to adapt itself from infancy to old age, now with success, now with failure, most commonly with a moiety of both, to an ever changing and richly complex environment. If, then, a man's mind is diseased, if his emotions are at war with his reason and both with his environment, if he is depressed, miserable and ineffective, it pleases him little to know that his thoracic and abdominal viscera are tolerably healthy. What he wants is mental health and he will seek it within, perchance failing this, without the medical profession if he thinks he may find it there. Because this is so, mental hygiene derives from it not its warrant for existence merely, but also the inspiration for its hope and the rewards of its labor. In the racy language of commerce, one may say that mental hygiene fills a long felt want.

Well then what attitude shall we citizens who happen to be physicians adopt towards it? Of course we should support it, as we have supported vaccination, the purification of food and water supplies, the crusades against tuberculosis and venereal diseases—in a word, as we have supported every legitimate and intelligent effort to al-

leviate or remove disease and suffering. But let us start with clear ideas. Mental hygiene is not a movement started and sponsored by sympathetic people within and without the medical profession, who weave visionary schemes out of the fabric of dreams: they are people who deal with pressing realities, to wit, facts and figures. The insane increasing apace, the delinquent and the defective born every day, the neurotic and the maladjusted are not phantoms; they are very real and have real reasons for their existence; they cost us a lot of money now and in the not distant future they will cost us a great deal more. Philanthropy and charity aside, ordinary enlightened selfishness should promote an interest in mental hygiene. If in any way our burdens can be lightened, let us support those who are striving to do it. Again, the leaders of mental hygiene have no illusions: they have been practicing medicine too long for that. They do not pretend that they or anyone else can construct a new heaven and a new earth. What they do say is that if public interest and co-operation can be obtained, certain things which are bad need not be as bad as they are.

In our own State, for example, consider this. Let us suppose you are mentally so sick as to require institutional care. You may be sent to the State Hospital for Mental Diseases, without publicity, provided—you or somebody else can pay seven dollars per week for your care. If, however, you are poor—now mark this well—then the State penalizes your poverty. Oh, we know full well that some people deny it; but observe what happens. A warrant is sworn out at the instigation of the department of police, you are "charged with being insane" and having been taken to Court, in an ambulance if you are too sick for other means of transportation, your poverty and your mental affliction are there publicly proclaimed and you are committed to the State Hospital, to be detained until discharged by due process of law. Those of us who have for years not only witnessed but taken part in this procedure have been amazed at the callousness of the public opinion which can tolerate such treatment of sick people whose only reason for being in a Court is that they are poor. Perhaps this thing exists through public ignorance. Well, then, if the Rhode Island Society for Mental Hygiene can accomplish no more than the abolition of this anachronism it will have deserved well of every citizen in the State.

HEALTH INSURANCE.

Good health is one of the most cherished hopes of every human being. A long life free from suffering and disability falls to the lot of very few persons but is sought after by everybody. That such good fortune should fall to the lot of every one is Utopian, yet it is well known to those who realize what can be accomplished by preventive and curative measures even in their present crude state, that the health of the human race can be greatly improved, even in the most enlightened countries.

Preventative measures are indisputably a governmental function. The money spent on proved methods of public health insures large returns, and the public in general is beginning to fully realize it.

How the sick and injured can best receive efficient and adequate treatment is an open and live question. Without giving consideration to suffering entailed, it is economically a wise principle that every sick and injured person should be furnished with the very best treatment possible.

In this country the private physician and hospitals have met the problem in a fairly satisfactory manner, yet it falls short of perfection. The well-to-do have nothing to fear, for they can employ the best medical and nursing talent, but the middle class and poor are not receiving enough medical attention of high quality. To meet this need the number of hospital beds has increased enormously during present years. They are doing a wonderful work and are appreciated by the public, as evidenced by their generous support. The country is able to support still more hospitals through private contributions, the patients themselves and the public treasury. Hospitals, however, cannot meet the whole problem, particularly the care of the ambulatory case. Out-patient departments are increasing in numbers and health centers are being established, and the treatment of the ambulatory case is being solved to some extent in this manner.

With the increase in hospitals and dispensaries, the burden falls heavily upon physicians. They have their own practice to attend to and are hard pressed to attend properly to the charitable work demanded of them. People little know the hours and energy they spend in hospital duties for which they directly receive no compensation. If hospitals had to pay for medical services, their work would have to be greatly restricted. Then, too, there is

the rural population to be served, which constitute about half the country's population, for whom hospitals and dispensaries are not easily available.

Germany, England and other countries have tried to meet the medical problem by insurance to raise funds to pay government physicians. Nowhere has it been a success. Such government physicians are often political appointees and are given so much work to do that it is superficially done. Health insurance has been much talked of in this country, but there are grave objections to it.

The sick and injured must be properly taken care of and it is up to physicians to do it well. Since it is their burden, it is high time that they went about deciding how it is to be done. During the last two years the American Medical Association has given considerable attention to the subject but no comprehensive solution has been propounded. If physicians do not map out a program, politicians will, because the public demand, offer their solution which is not likely to properly serve the public nor the physicians.

There are physicians enough in this country to take good care of all the sick and injured if the time of all physicians is utilized, and plenty of money in the country to amply pay the physicians for their services.

THE PHYSICIAN AND THE ELECTIONS.

The biennial elections will be held in a few days throughout this part of the country. We wonder if the physician realizes the responsibility as well as the opportunity which he possesses to further any piece of effective legislation and at the same time help to quash any piece of vicious legislation. As the doctor goes on his daily rounds, he passes the time of day with many and varied sorts and conditions of people. The conversation naturally turns upon subjects of greatest interest and as the time of the election approaches, more and more attention and conversation will be directed to the men who are up for office and to the platforms of the different parties. Here is an opportunity to put in a good word for a man who has interested himself in problems of public health and the protection of the people against contagious diseases and the prevention of illness. There is also the opportunity, by the same token, to call attention to the man who has neglected to stand up for these public safety guards. A word from the doctor on

such a subject will have great weight in the average family. Naturally, he should not abuse his privilege and attempt to play cheap party politics; but as long as he sticks to his ideal, he can be a great power for good in the community.

The experience in one of the counties in New York State is worth repeating and we believe it is not generally known. A few years ago the committees of the New York State Medical Society interested in the furthering of public health legislation were confronted in this particular county with a group of politicians who frustrated their efforts. The physicians organized themselves in a body and on their daily rounds discussed the subject with their patients. Naturally a large proportion of the people was reached in this way. At the next election when these same politicians again sought office, every one of them was defeated because of the very effective propaganda instituted by these physicians. What was done in New York State can be done in Rhode Island or in any other community.

Our duty to the public in the matter of public health legislation is self evident and it is our duty as citizens to see that the right men are nominated and elected and that such laws are put upon our statute books. In the same way an organized profession can do much to prevent the inroads of the irregular practitioners who are gaining an important hold upon the public in all parts of this community. The medical profession is passing through a critical stage in its existence, but we cannot correct these evils by ignoring them. We must get together and do co-operative work for the best interests of the public. In this way and in this way only will the medical profession regain the standing which it had two generations ago in the hearts of the public of this nation.

SOCIETIES

PROVIDENCE MEDICAL ASSOCIATION.

Monthly meeting was held Monday, October 2, 1922, at Rhode Island Medical Society Library, Francis Street, at 8:45 p. m.

The following program was offered: "Symposium on Anterior Poliomyelitis." Paper: "Anterior Poliomyelitis as Exemplified in Recent Epidemic," Dr. D. L. Richardson, Providence, R. I.

Other speakers were: Dr. B. U. Richards, Sec-

retary State Board of Health; Dr. Charles V. Chapin, Superintendent of Health; Dr. Charles A. McDonald, Dr. Harvey B. Sanborn, Dr. Carl D. Sawyer, Dr. Murray S. Danforth, Dr. Henry L. Johnson, Westerly R. I.

The Standing Committee approved of the application of William A. Mahoney.

WASHINGTON COUNTY MEDICAL SOCIETY.

Quarterly meeting was held at the Elm Tree Inn, Westerly, Thursday, October 12, 1922, at 11 A. M. Paper: "Remarks Upon Recent Studies in Diseases of the Heart," Dr. Frank T. Fulton of Providence.

W. A. HILLARD, M.D., *Sec.*

HOSPITAL NOTES

RHODE ISLAND HOSPITAL.

Drs. Charles A. Levin and Frank W. Harrah finished two-year internships October 1st.

Drs. John Champlin and Francis Garside started two-year internships October 1st.

The regular annual meeting of the corporation will be held at the Hospital Wednesday, November 8.

The regular Hallowe'en party for the children at the Crawford Allen Memorial Hospital will be held Saturday, October 21.

NORMAN C. BAKER, M.D., *Sec.*

MISCELLANEOUS

WE START TO DIE AS SOON AS WE'RE
BORN! BUT WHY HURRY
THE PROCESS?

These headlines present a rather startling conception of life. That conception is none the less literally true.

Equally true, is the fact that a careless attitude toward essentials of living—a remarkable failure to put into use established means of conserving health and vigor—provides true grounds for the question above.

We speak with bated breath of thousands killed in battle—and don't even discuss or notice the fact that hundreds of thousands of lives are hurried to an end each year, by absolutely known and preventable causes. We'll thankfully go to a hospital for six, eight or ten weeks, to recover and

convalesce from typhoid or dysentery. But we won't give the few hours of time and the few moments of thought which, given by enough of us, would control these diseases almost to the point of extinction. We'll collectively spend hundreds of thousands of dollars to build tuberculosis sanatoria. And we won't spend a few moments' time, personally, to educate a sufferer of the disease—ourselves or another—in the means of preventing its spread.

Figures available from sources that are beyond question show that more than 250,000 deaths, not to mention 4,500,000 cases of sickness each year, result from neglect of simple and practical means to prevent the spread of typhoid, dysentery, summer complaint, and hook worm. Thus, in our national neglect of sanitation—in which each of us has his individual share of guilt of what amounts to murder—we are allowing ourselves to be killed, each year, in numbers which far exceed the total loss of life in the A. E. F. during the World War.

The research department of the Indiana State Board of Health indicts the outdoor toilet as responsible for 85 per cent of the cases of typhoid. In Johnstown, Pa., as early as 1915, research of the Children's Bureau of Washington, D. C., turned up these facts: In homes where bathtubs were found, the death rate of babies was less than half of that in homes without them. In homes where there was a water closet the death rate was 108.3 as against 169.3 where there were only yard privies. If these facts say anything at all, they shout aloud, "Spread the knowledge and the means of sanitation; insist on safe disposal of sewage and protect water supply from defilement."

Surely it's high time to move along the line of ending this heedless waste of life and health. The National Good Health Week movement is one in which we can all take active part, spreading the idea of better health protection, and extending knowledge of ways and means to that most desirable end. Every time we put into use any of the perfectly available means of modern sanitation—every time we educate and inform our neighbors regarding them—we reduce our own hazard of bad health and help to raise the life expectancy of every member of our families and our communities.

ANNOUNCEMENT.

U. S. NAVAL HOSPITAL, NEWPORT, R. I.

Graduates in medicine under 32 years of age actively engaged in practice are urged to consider the Medical Corps of the United States Navy as a field for medical work. Naval medicine is perhaps the most comprehensive of the specialties. A naval medical officer must be a versatile man, well grounded in the fundamentals of his profession.

Besides giving an opportunity to practice medicine upon a high ethical plane and to offer service to one's country, the Navy provides for the development of the man himself professionally and culturally. Naval hospitals in the United States and in our insular possessions offer clinical material of the most varied sorts. Then, too, the travel and the adventure tend to broaden a man's outlook.

The Navy offers assured financial independence from the start. The pay of a lieutenant (junior grade), (rank of medical officer on admission to the service), is \$2,000.00. With dependents, a rental allowance of \$720.00 is added. The subsistence allowance is \$438.00. The pay is increased for each three years of service.

Lieutenants (junior grade) are eligible for promotion to lieutenants after three years. The pay of a lieutenant is \$2,400.00. A rental allowance of \$960.00 is allowed for dependents and the subsistence allowance is \$438.00.

The financial worries and petty annoyances that harass the private practitioner, especially in his early days of practice, are eliminated. Moreover, the Navy not only allows thirty days leave a year, with sick leave as required, but also protects against disability by retirement at three-quarters pay after 30 years' service. Old age is provided for by retirement at the age of 64 years on three-quarters pay.

For further information, address the Chief of the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

OBSERVATIONS ON THE HEART IN MOTHERS AND THE NEW-BORN.

Clinical, cardiographic and radiographic examinations made by S. Calvin Smith, Philadelphia (*Journal A. M. A.*, July 1, 1922), indicate that

pregnancy, in itself, does not cause cardiac enlargement. Such evidences of cardiac enlargement as may be present in the expectant mother under certain circumstances of examination are shown to disappear under other circumstances. Cardiac enlargement in the latter half of pregnancy can be simulated by the upward pressure which the gravid uterus exerts on the heart, causing cardiac displacement. There are no heart affections which are characteristic of or incident to pregnancy. While pregnancy, in all likelihood, throws a load of some degree on the heart, the heart is as fully capable of adapting itself to this as to other physiologic demands. A definite history of previous infections requires that the expectant mother be closely observed, as pregnancy advances, for symptoms of masked heart disease, which may not become apparent until brought to light by the heart load of pregnancy. Focal infections may cause symptoms of heart embarrassment in pregnant patients, which might erroneously be attributed to pregnancy. Definite cardiac indications for the interruption of pregnancy are rare. Even frankly diseased hearts will exhibit a surprising adaptability to the physiologic demands of pregnancy. The right side of the heart is enlarged in the new-born. Evidence of cardiac enlargement persists for five weeks, or longer, before the baby's record begins to assume adult characteristics. The heart, following birth, is frequently irregular at intervals during the first week. Such irregularities may be expected to disappear at a later date and are not indicative of cardiac pathology. Graphic records suggest that it may be possible for maternal irregularities to be transmitted to the child. In a stillborn baby, evidences of heart activity were observed for three hours and twenty-four minutes following stillbirth. Massage of the heart through the chest wall may prove to be a useful adjunct to other methods of resuscitation in the stillborn.

PROVISIONAL BIRTH FIGURES, 1922.

Washington, D. C., August 31, 1922.—The Department of Commerce announces that provisional birth figures compiled by the Bureau of the Census for the first quarter of 1922 indicate lower birth rates than for the corresponding quarter of 1921. For the States compared, the total birth rate for the first quarter was 23.3 in 1922 against

25.3 in 1921. The highest birth rate for the quarter (29.2) is shown for North Carolina and the lowest (16.5) for the State of Washington. Higher rates will be necessary for the remaining months of the year if the 1922 rate is to equal the 1921 rate for the birth registration area—24.3.

LEGAL STATUS OF PHYSICIANS AND SECTARIANS.

Summarizing the discussion of this subject, Frederick R. Green, Chicago (*Journal A. M. A.*, Sept. 23, 1922), says that the regulation of those desiring to treat the sick should be based on educational rather than sectarian standards. Such regulation should be administered by the State educational authorities. For economical and efficient administration, the regulation of all professions, occupations and trades supervised by the State government should be placed in the hands of a single State department, which should have as its head an educator of recognized standing and demonstrated executive ability. Whatever machinery for regulation is adopted, it should be recognized that the object for such regulation is the protection of the public, and that the people should pay for this protection as they pay for protection from any other danger. Such laws are emphatically not intended for the restriction of competition among practitioners. A third principle on which the medical profession should insist is that all persons desiring the same privileges should be required to comply with the same educational standards, without regard to the school from which they graduated or the sect to which they belong.

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ORIGINAL ARTICLES

THE ENDOCRINE GLANDS.*

By FRANK T. FULTON, M.D.
PROVIDENCE, R. I.

It is the purpose of this paper to review briefly some of the normal functions of the ductless glands as far as known, to touch upon some of the disturbances of function which are fairly well understood, and finally, with reference to the glands less well understood, to present some of the conflicting views without arguing for any conclusion, that you may realize the confusion which still exists in regard to the knowledge of the subject.

In going over the literature one can readily recognize two distinct groups of individuals who are actively engaged in studying this subject. The one group, rather strictly scientific, is composed of physiologists and experimental pathologists who try to reproduce in animals, more or less nearly, some of those conditions which are well recognized clinically and are believed to be due to disturbed endocrine function. The other group is made up of clinicians. Some of these have had laboratory training, are conservative, have critical judgment and are contributing valuable observations. But many lose sight of the scientific side, are fascinated by the wonderful variety of symptoms and conditions and are carried away by theories until their enthusiasm so warps their judgment that their conclusions are of little value. To these two classes of individuals we must look for the development of our knowledge of the endocrine glands.

Thyroid. Of all the glands, the function of the thyroid is the best understood. The various clinical pictures due to disturbance of its function are more or less familiar and need not be considered here. The methods of arriving at a diagnosis of any increased or diminished function of the gland have been developed so that the diagnosis can be made with considerable degree of certainty. The

basic fact that seems positively demonstrated is that the function of the thyroid is to control cellular activity. This it does by the production of thyroxin, a definite chemical substance with a known formula.¹ The total amount of thyroxin in the body is extremely small and has been estimated to be about 14 mgr. (equivalent to about 1/5 of a grain). In a thyroidless individual with myxedema, the average basal metabolism is about 40% below normal. By the injection of 14 mgr. of thyroxin in such an individual the metabolism is raised to normal. In fact, the metabolic rate of a thyroidless person can be controlled at will, and kept at practically any level by the administration of thyroxin—at normal, above normal or below normal. When there is an increased amount of thyroxin in the system, whether it is injected or whether it is produced in excess by an adenomatous goitre, there develops the characteristic train of symptoms of hyperthyroidism associated with greatly increased cellular activity and a much elevated level of metabolism. This is the only instance in which the active principle of a ductless gland has been isolated and successfully used to replace the function of the gland.² What relationship thyroxin bears to the other ductless glands is not known. There are disturbances of metabolic rate due to changes in the pituitary gland, in the pancreas, and perhaps in the adrenal, but these disturbances are to much less extent than those following thyroid changes. Kendall has suggested that the other glands are of secondary importance in this respect and that thyroxin stimulates them to activity.

Brooks,³ in a discussion of the milder types of hyperthyroidism, takes the accepted view that the thyroid gland is the activator of cellular metabolism, and that cellular activity is back of all other activities of the body. He attributes to thyroid function "the alert, aggressive attitude of the healthy young man and the similar, though femi-

*President's address, Providence Medical Association, January 2, 1922.

²Very recently an extract from the pancreas called "Isulin" or "Iletin" (supposed to be from the Islands of Langerhans) has been used by hypodermic injection. This seems to increase temporarily the carbohydrate metabolism in the diabetic.

nized, pose of the healthy young woman," and suggests that the embarrassments, nervous apprehensions, and other emotional states are to a certain degree, though not exclusively, evidence of thyroid activity. He argues that the more virile, attractive, and charming the individual, the more likely it is that a large thyroid gland is present, and that such a person responds to emotional and mental stimuli with quick and appropriate reactions. His discussion along this line is extremely interesting but more or less speculative. He emphasizes his belief that some of the most brilliant and active students and useful young men are those who have an unusual amount of thyroid activity; and that occasionally, because of unusual stress, the gland overfunctions, producing its well known symptoms, which can often be corrected by very simple measures.

Adrenal Glands. The adrenals are made up of two parts, the medulla and the cortex, which differ from each other in their cellular structure and their origin. The cortex has the same origin embryologically as the genitalia and in tumors of the cortex there is frequently some abnormal sex development. The medulla arises from the same cells from which the sympathetic nervous system takes its origin.

The physiological data and some clinical views, with reference to the function of the adrenals, are presented in a most admirable way by Stewart.⁴ Most laboratory animals in whom the adrenals have been removed die, evidently from the lack of something which is indispensable to the bodily functions; but the symptoms which these animals show subsequent to the removal of the glands and the manner of their death are in no way characteristic. Even the experimentors themselves admit that the manner of death might be brought about by various other causes besides the removal of the glands. Neither has it been possible to produce any characteristic symptoms associated with partial adrenal insufficiency even though the changes may gradually lead to death. In this the adrenals differ markedly from the pancreas, for portions of the pancreas may be removed and a characteristic diabetes be produced.

Clinicians have so long known of adrenalin and of some of its characteristic actions that the impression generally prevails that adrenalin is the important secretion of the adrenal gland. All

physiological evidence, however, is that the cortex of the gland is the part which is indispensable to life and not the medulla, although it is the medulla which secretes the adrenalin. In dogs and monkeys the secretion of adrenalin has been gradually diminished or entirely suppressed by the removal of one adrenal and by section of the secretory nerves of the other; yet the animals have survived indefinitely in good health. There is, then, no evidence that diminution of the output of adrenalin or even total deprivation can give rise to symptoms, and animals deprived of it may even endure forced muscular effort as well as normal animals.

Clinically also there seems to be insufficient evidence to substantiate the view that in so-called hypoadrenia or arterial hypotension, the diminished output of the adrenals plays any important part; or that adrenalin is important in the adrenal insufficiency, such as is illustrated by the well known syndrome of Addison's disease. Further, there is no evidence that any notable change occurs in the adrenal output in either direction in cardio-vascular shock, or that if it did occur it could play any part in producing it.

As opposed to the conservative views of Stewart, a quotation from Timme⁵ is of interest. He says, "The hypoadrenal individual cannot undertake work that requires much energy or requires sudden demand for exertion or shock. He succumbs to anaesthesia, to sudden speeding, to stair climbing. He is prone to suffer from the various disturbances of the dystonic vascular or smooth muscular system, such as spasmodic asthma, urticaria, angio-neurotic edema; and from the vagotonic disturbances such as hyperacidity, gastro-intestinal hypermotility, low carbon dioxide tension of the blood, eosinophilia, intense perspiration, slow pulse, positive oculo cardiac reflexes, and many other symptoms and signs of this syndrome." This statement is the product of an active imagination and cannot as yet be substantiated.

The work of Cannon⁶ which has shown that fear, rage and pain increase the adrenalin output and at the same time apparently make available in the blood some of the glycogen of the liver in the form of sugar, making it quickly available for energy, suggests that Stewart's views may be over-conservative.

Pituitary Gland. Marie in 1886 called attention

to the association of acromegaly with pituitary tumor and Froelich in 1901 showed that such tumors were sometimes associated with underdevelopment of the skeleton and adiposity. In 1907 experimental work was begun by Paulesco, who devised a method of operation which was later perfected by Cushing and his associates and since that time there has been considerable information obtained concerning pituitary abnormalities and the changes which are associated with them. As is well known, the gland consists of two distinct parts, an anterior lobe of epithelial origin, coming embryologically from the tissues forming the mouth, and a posterior lobe, an offshoot from the central nervous system, the latter being more or less enveloped by the former. There is a third part called the pars intermedia which is of epithelial origin but intimately attached to the posterior lobe.

Englebach⁷ has attempted a classification of the disorders of the gland, based upon whether it is the anterior lobe or the posterior lobe which is involved, and whether the involved lobe over-functions or underfunctions and also whether the disturbance occurred in the pre-adolescent or post-adolescent period of life. It is believed that the anterior lobe has to do with the bony development and with the development of the genitalia and when the function is disturbed these parts develop abnormally and are associated with abnormalities of the skin, teeth and hair, temperature, pulse, and blood pressure. In Englebach's classification there falls under disturbances of the anterior lobe four distinct groups, two of them caused by *under-function*. The first occurs if the hypofunction begins before adolescence, in which case the individual is in every way underdeveloped. The second is when the hypo-function develops after adolescence. The other two groups are caused by *over-function*, the characteristics depending upon whether the over-function began before adolescence or subsequently. Without going into detail, one may say that hyper-function in the pre-adolescent state produces gigantism of the various types, while in the post-adolescent period it produces growth in the flat bones with enlargement of the ends of the long bones, the resulting condition being recognized as acromegaly.

The secretion of the posterior lobe is believed to have to do with metabolism. When this secre-

tion is disturbed there are variations of carbohydrate tolerance, with glycosuria, and hyperglycemia, adiposity, and polyuria, the symptom complex being known as adiposo-genital-dystrophy.

Cushing noted, in experimenting with dogs, that after removal of the posterior lobe there would be the development of a condition closely resembling this and also that these dogs had persistent polyuria. The results of these experiments seemed to fortify the belief that this clinical syndrome was due to pituitary abnormality. However, very recently Bailey and Braemer have published some very careful experiments on dogs in which they believe that they have positively shown that the polyuria which is essentially a diabetes insipidus is caused, not by removal of the posterior lobe of the pituitary but by injury to a neighboring structure, the hypothalamus, and they have been able, by puncture of the hypothalamus, to produce this polyuria, which is either transient or permanent, depending upon the extent of the lesion which they make. In two instances the dogs also developed the adiposo-genital syndrome. They cast considerable doubt upon some of the views which have been held with reference to the pituitary body and maintain that diabetes-insipidus is due to an injury of the hypothalamus rather than to the injury of the pituitary gland. They are responsible for the statement that pituitrin has never been shown to be a secretion and that there is no evidence that it is anything else than a pharmacologically very interesting extract. They maintain that there is as yet very little knowledge of the functional significance of the pituitary gland and cite the fact that the posterior lobe may be removed without causing any symptoms.

It is not profitable in a paper of this character to enter too much into the details of the discussion, but it is of great interest to compare these findings, as they show in what an unsettled state the knowledge of the pituitary gland still remains.

The Gonads. Brown Sequard, in 1889, at that time 72 years of age and a very feeble man, inoculated himself sub-cutaneously with the filtered extract of the testicle of a dog. This was repeated several times with apparently a great deal of benefit. His physical strength appeared much increased, his mental activity returned and he carried on active, arduous work for some time. Subsequent investigators have not been able to attain

any very satisfactory results along this line. At the same time, the work of Steinach, who has attempted rejuvenation by ligation of the vas deferens, has aroused considerable interest. The operation has been reported a success in the hands of certain operators but a failure in others. His idea has been to divert nutrition from the seminiferous tubules to the interstitial elements of the gland.

Experimentalists have shown very definitely that if the ovary is removed from a growing fowl and the testicle transplanted from the male, the animal will take on the appearance and characteristics of the male, and the opposite result can be obtained by transplanting ovaries into the castrated male bird. Operations on rats and guinea pigs have shown that secondary sex characteristics may be produced practically at will and that by transplanting of the ovary into young, castrated males, the normal male genitalia will show regressive changes, while the skeleton takes on the feminine type, breasts may develop, and the entire attitude of the animal may change so that the male can and will suckle young.

It can be seen, then, that there is some remarkable specificity of the interstitial secretions of these glands. Just how much this action may depend upon the interrelation with other glands is unknown, but the abnormalities of the genitals in association with pituitary disorders and adrenal tumors suggest that there is some intimate interglandular stimulation or inhibiting action.

Thymus. Hoskins⁸ reviews at some length the present knowledge of the thymus gland and experimental work in connection with it and the various theories of its function. The evidence in favor of there being a real secretion is meagre and circumstantial and while it is difficult to prove that it does not produce a secretion, the burden of proof lies upon those that claim that it does. Figures show, contrary to the prevailing idea, that the thymus is proportionately much larger at birth than it is at puberty, that it diminishes in size in proportion to the body weight as the child grows older, and that it is associated with a corresponding diminution of lymphocytes in the blood. The theory prevails, then, in Hoskins' opinion, that it is a part of the lymphoid system, furnishing lymphocytes and leucocytes for the purpose of combating infection, and that this system diminishes

as the individual grows older and its need is lessened.

In contrast to the opinion of Hoskins, that of Timme⁹ will serve as a good illustration of what may be the opposing views of the two types of observers. In his opinion, under the influence of the thymus, the body takes on its growth, while at the same time inhibitory factors are operative in the direction of the gonads. In other words, sex differentiation is held in abeyance. Without going into too much detail, the theory is, that with a persistent thymus the child's growth will be abnormally rapid and the secondary sex characteristics will be delayed, the individual is childlike, self-centered and imitative, and late in developing normal mentality. On the other hand, with early involution of the thymus, the child's growth is checked and he is undersized, but he has an early, rapid, differentiation of the secondary sex characteristics and is likely to be unusually precocious mentally.

One view, then, is that the thymus has no internal secretion, while the other is that its over or underfunction will modify to an extraordinary degree the growth and personality of the individual.

Parathyroids. It has been demonstrated that the symptoms of tetany which were sometimes observed in the earlier cases of thyroidectomy were caused by the accidental removal of the parathyroid glands. Their function seems to be concerned with the metabolism of calcium or guanidine and the suggestion is made that they may play some part in the acid-base equilibrium of the body. Whether idiopathic tetany, not associated with operation on the thyroid, is of parathyroid origin has not been proven. In post-operative tetany large doses of calcium are usually of benefit.¹⁰

Berkely¹¹ is of the opinion that a deficiency of the parathyroids is a cause of paralysis agitans and that it will be ultimately possible to cure the disease by supplying this deficiency as it is possible to cure cretinism by the use of thyroid. This theory seems to have very little support.

TREATMENT WITH ACTIVE PRINCIPLES, GLAND EXTRACTS, ETC.

The lack of the thyroid principle can be supplied by feeding whole thyroid glands, thyroid extract,

or by injecting thyroxin. So far as any of the other disorders of function are concerned, our knowledge of any method of supplying the principle which may be lacking is not sufficient to enable us to treat any of them with anything like the same assurance. To give an idea of the actual state of knowledge, I shall refer to a few suggestions made by various of the endocrinologists.

Timme¹² advises the administration of pituitary gland in adrenal insufficiency and advises against adrenalin extracts for any length of time, as these seem to retard the activity of the individual's own adrenals. Just how he determines whether the individual's adrenals are secreting or not and how he determines the retardation he does not state.

Larson,¹³ in experimenting with young rats which have had the thyroid glands removed, states that there is a beneficial action on their development and their growth by administration of the anterior lobe of the pituitary.

Hoxie,¹⁴ in referring to endocrine therapy for maintaining vasomotor tone, says that experience leads one to believe that low blood pressure is not because of adrenal insufficiency and says that the pituitary gland seems to be of the most benefit for maintaining blood pressure. He believes that the pituitary gland and thyroxin regulate the blood pressure and thinks that the extract of genital glands may have a value.

Ebaugh and Hoskins¹⁵ treated a case of adipo-genital dystrophy for six months with dessicated pituitary, thyroid and suprarenal substances with very marked changes in his condition. While they make no claims as to proving that the improvement was due to the gland administration, their report is very suggestive. It is evident that there is a prevailing belief in a distinct interglandular relationship. But carefully controlled experiments must yet be made in order to determine the value of any of these gland substances or extracts, for this can never be determined by the indiscriminate use of mixed glands. The use of the latter, on the other hand, may be definitely harmful.

Basal Metabolism. One naturally associates in his mind basal metabolism with the subject of endocrine glands. Within the last two or three years there have been various types of instruments offered for the purpose of measuring this rate, some claiming that the procedure has been reduced to

its simplest terms. Considering all the conditions necessary for the determination of metabolism, the results in the hands of the inexperienced are likely to be inaccurate, and, if inaccurate, misleading. Even when done with the greatest care, it is quite generally accepted that the practical value is only in connection with hypo or hyperthyroidism—first of all with reference to diagnosis and second as a control in treatment and that any variation in metabolism associated with disturbance of activity of any of the other glands has no clinical significance.

The extent of the literature on the endocrines is almost incredible. The little journal which is devoted to endocrinology has an abstract department in which they attempt to give the titles of all current articles and a brief review of each. During the past year they have reviewed about 1,200 articles. A great amount of the stuff is worthless. Especial reference should be made to a book on the endocrines by Bandler, particularly because the book has had a rather wide sale. At first glance it is rather plausible, but on the whole its influence is pernicious. The author says, "In conclusion, let me make this prophecy. In five years there will be few mental defectives (except those already developed), few feeble-minded, few insane, few tumors, few cancers, few diabetics, few renal diseases, and so on. Since they are due to endocrine aberrations, they will be arrested in their earliest stage by endocrines. When the next war comes, if it does at all, soldiers before going over the top will not be given alcohol; they will be given endocrine cocktails and the adrenal cortex will be an important ingredient, and if the world in the near future administers to its diplomats, to its highest officials, to its legislators, and to its people, the proper endocrines, especially the anterior pituitary, and inhibits the adrenal cortex a little bit, there may be no more wars." This is said in all apparent seriousness.

Hoskins, in reviewing the book, says, "There is nothing in the presentation to exclude the judgment that he (the author) is merely a deluded enthusiast."

He further says that until "writers accept the obvious fact that the fundamental data is in a state of chaos and present their material on an empirical statistical basis, endocrinology can lay no convincing claim to be regarded as a valid science

and in the meantime the field inevitably will continue to offer a happy hunting ground for quacks and faddists."

Something should be said about the relationship of these glands to the autonomic nervous system but in such a brief resumé it is not possible to do more than barely touch upon a few phases of the subject. In its consideration, however, one is impressed by the fascinating problems that are offered for the study of the ductless glands and is encouraged by the hope that at some future time some of the obscure ailments will be better understood. To make this study profitable, conservative judgment is essential, otherwise enthusiasm based on faulty conclusions drawn from few and superficial observations will lead one far astray.

- ¹Kendall & Plummer, Journal A. M. A.
- ²Brooks, Endocrinology, Vol. V, 1921, p. 177.
- ³Endocrinology, 1921, Vol. V, No. 3, p. 283.
- ⁴Neurological Bulletin, 1921, Vol. III, No. 1, p. 3.
- ⁵American Journal Physiology, 1914, Vol. 33, p. 357.
- ⁶Endocrinology, 1920, Vol. IV, p. 347.
- ⁷Endocrinology, Vol. II, No. 3, p. 241.
- ⁸Neurological Bulletin, 1921, Vol. III, No. 1, p. 3.
- ⁹Endocrinology, Vol. V, No. 4, p. 403; Boothby.
- ¹⁰Med. Record, N. Y., 1916, Vol. XC, p. 105.
- ¹¹Neurological Bulletin, 1921, Vol. III, No. 1, p. 3.
- ¹²American Journal Physiology, 1919, Vol. 38, p. 55.
- ¹³Endocrinology, Vol. V, p. 773.
- ¹⁴Ebaugh & Hoskins, Endocrinology, 1921, Vol. V, p. 121.

GENERAL PRINCIPLES OF THE TREATMENT OF SKIN DISEASES.*

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In treating a disease of the skin there are certain general principles which should be understood in order that we may counteract or remove the morbid condition present. First, we must endeavor in every way possible to determine the exact etiology of the disease: is it a purely local disease, that is, is the morbid process confined entirely to the skin, or is it a symptom or manifestation of a constitutional disorder?

Those dermatoses which are due to an invasion of the skin by bacteria or parasites are most often purely local and only local measures are required in their treatment. Other skin diseases are now considered to be a manifestation of a toxemia due to bacterial foci in some part of the body. Examples of this type are lupus erythematosus and

erythema multiforme. Still others are vaguely due to faulty digestion or metabolism or to some form of food sensitization, for example, certain forms of eczema and urticaria.

In such constitutional diseases as Hodgkins disease, leukemia and diabetes, we sometimes have pronounced skin lesions. The fact that the skin manifestations are due to an internal disorder has an important bearing on the prognosis but does not prevent our doing a good deal in the way of local treatment to relieve the patient's discomfort or suffering.

EXTERNAL APPLICATIONS.

In prescribing external remedies for cutaneous diseases we should bear in mind the general rule that when the skin is highly inflamed, soothing and protecting applications are called for. For example, in an acute dermatitis of the face or hands with heat and redness and sometimes the formation of vesicles or blebs, the greatest relief can be obtained by covering the part with a gauze dressing kept constantly wet with a very mild antiseptic solution such as boric acid or Burow's solution (liquor alumini acetatis N. F.); the latter should be diluted, one part of Burow's solution to eight parts of water. In such cases the use of a strong antiseptic lotion or ointment may do actual harm. When the disease has reached a subacute stage or in cases which are subacute from the onset, Lassar's paste with 1% or 2% salicylic acid or the calamine and zinc lotion are useful, or the two may be alternated. The formula for Lassar's paste is as follows:

Amyli	
Pulv. zinci oxidi	aa drams iv
Petrolati	oz i
Acidi salicylici	gr v-x

As will be noted, there is the same amount by weight of powder and of vaseline in this prescription. This makes a rather dry paste which allows exudation to pass freely from the skin instead of holding it there, as the ordinary salve tends to do.

The usual formula for the calamine and zinc lotion is:

Calamine prep.	
Pulv. zinci oxidi	aa oz ½
Sodii Biboratis	
Glycerinae	aa drams ii
Aquae calcis	Q. S. ad oz viii

*Read before the Pawtucket Medical Association, October 19th, 1922.

This lotion is sopped on the skin with a piece of cotton or gauze and allowed to dry. It exerts a distinct drying effect on the skin and is not often used on the face, as it is apt to make the face feel stiff and drawn. But on the other parts of the body it is an extremely useful application. Phenol 1% or 2% and menthol $\frac{1}{4}$ % are often added to increase its soothing and antipruritic effect.

If the subacute inflammation merges into the chronic we use slightly more stimulating treatment, such as a weak tar ointment, as follows:

Amyli	drams ii
Crude coal tar	drams $\frac{1}{2}$ -i
Petrolati	oz i

Or if there is beginning infiltration of the skin, we may increase the amount of tar in this prescription and we may often enhance its effect by adding 2 to 4% of salicylic acid. The tar may be replaced by sulphur, 30 to 60 grains to the ounce, with good results in some cases. If the skin becomes markedly thickened and infiltrated we use stronger salicylic acid ointments—5 to 10%—with the addition of tar in some cases, or chrysarobin—2 to 5%—and the ointment is thoroughly rubbed in the skin. Chrysarobin should not be used on the scalp or face on account of the danger of getting it in the eyes.

BACTERIAL AND PARASITIC DISEASES.

A common example of a bacterial skin disease is impetigo contagiosa, due to the streptococcus pyogenes. This is readily curable by ammoniated mercury ointment. The crusts are first softened and removed by the application for a half hour or more of a pad of gauze soaked in warm water to which soap has been added. Then the ointment containing 2% of ammoniated mercury is applied. The 10% ointment of the U.S.P. is unnecessarily strong and will irritate the skin in many cases.

The most common example of a parasitic disease is scabies, due to the *acarus scabiei*. As we all know, sulphur ointment is the remedy for scabies, but if it is not properly used, together with other measures, which I will describe, the patient often fails to get well or soon becomes reinfected. From a too long use of sulphur ointment a sulphur dermatitis is likely to occur and this complication is more severe and more difficult to cure than the original trouble. The sulphur ointment is prescribed in the strength of 1 dram of sulphur to

the ounce of vaseline or lard and the prescription should call for 12 or 16 ounces for an adult in order that the treatment may be properly carried out. For the treatment of scabies I have the directions printed which not only saves time in the office or outpatient service but also insures the patient's carrying them out as desired.

These directions read as follows:

1. Take a hot bath at night for half an hour, during which scrub the skin with soap. Dry by rubbing the skin with a coarse towel.

2. After the bath rub the salve well into the skin over the whole body, excepting the face and head. Give special attention to the hands, arm pits and abdomen. Use one-third of the jar of salve each night for three nights. While using the salve wear the same under-clothing and use the same night clothes and sheets. Do not bathe again until the fourth day.

3. On the fourth day take a bath, change under-clothing and bed-clothing.

If these directions are carried out faithfully the acari will be destroyed in the three nights' treatment and in the course of a week or ten days all of the papules and scratch marks will have disappeared. If the skin has become badly irritated or eczematized we prescribe soothing applications such as the calamine and zinc lotion previously mentioned.

Another common example of a parasitic affection is ringworm of the body. This disease occurred with marked frequency among our soldiers and sailors during the late war and is still prevalent, both among ex-service men and others. It has a predilection for the genitocrural region, where it is called *tinea cruris*, formerly termed *eczema marginatum* and in tropical countries known as *Dhobie itch*. Another common location is between the toes or fingers; it may occur on any part of the body, but in adults the scalp is never infected. For the treatment of this condition I have found the well known Whitfield's ointment extremely serviceable. It contains 6% salicylic and 12% benzoic acid in vaseline or benzoinated lard. This is rather strong for use between the toes, where it is held in close contact with the skin, and on the scrotum, and in such locations I usually prescribe it half strength.

The disease is very apt to recur after it is cured and to prevent this the Whitfield's ointment should

be continued at intervals of two or three days for a month or two. Some cases do not yield to Whitfield's ointment, but in my experience it is mainly those cases which have become eczemized and usually the dry form of this disease. In such cases the use of a wet dressing or immersing the part in an antiseptic solution for a time daily helps to clear up the condition, and for this 1 to 2000 potassium permanganate solution or the Burrow's solution previously mentioned is usually effective.

DISEASES OF THE SCALP.

Dermatoses of the scalp form a rather distinct class, both as regards the diseases which occur in this location and the treatment which is employed to cure them. A careful inspection of the scalp should be made in all cases of skin disease of doubtful etiology, particularly if occurring on the face or neck or on the chest or back. By this means we will often get a clew as to the exact diagnosis and the treatment required.

Pediculosis capitis is a common affliction, not by any means limited to the poorer classes. Many impetiginous and eczematous eruptions, not only on the scalp, but also on the face, neck or body, particularly in children, are due to this cause. The same may be said of seborrhoeic dermatitis, except that it is more common in adults than in children.

In a general way, stronger applications may be used on the scalp without producing irritation than on other parts of the body. For the removal of the pediculus equal parts of kerosene and sweet oil left on over night with the head covered with a rubber bathing cap is probably as good as anything. This should be repeated for three nights, with a thorough shampoo each morning, and on the third day a cloth dipped in vinegar should be used to remove the remaining nits from the hair. This must be done carefully and thoroughly in a good light.

In the treatment of seborrhoeic dermatitis of the scalp or body, ammoniated mercury and salicylic acid are two of our best remedies. They may be combined in an ointment containing from 2 to 4% of each. This may be applied nightly for a time, then once or twice a week at night, followed by a shampoo in the morning. No harm is done in these cases by washing the head once or twice a week. In fact, it is a distinctly beneficial meas-

ure and a necessary one in order that our treatment may be effective.

Seborrhoeic diseases of the scalp are very prone to recur, due probably to reinfection in barber shops, hair dressing parlors or from the patients' own hair brushes or hats. To prevent this a lotion containing one dram of resorcin, two grains of bichloride of mercury, to six ounces of equal parts alcohol and water should be rubbed in the scalp two or three times a week. For women, this lotion should be applied directly to the scalp with a medicine dropper, as it is not necessary to wet the hair. This prescription should not be used by anyone having blonde hair, because the resorcin is apt to stain the hair. In such cases the same amount of euresol should be substituted for the resorcin.

PHYSICAL MEASURES.

Among the physical measures useful in dermatology, I shall discuss briefly the Roentgen ray and radium, the mercury-vapor quartz lamp, carbon dioxide and electrolysis.

The use of the Roentgen ray and radium constitutes our most distinct advance in dermatology in recent years. The effect of the two measures on the skin is very similar. Radium has the advantage that it can be introduced into cavities or orifices such as the nose or mouth and its use in the treatment of leukoplakia and the raised vascular naevi is more effective than the X-ray. For the superficial malignancies—the basal called epitheliomata, occurring so frequently on the face, and early cases of the squamous celled variety, the Roentgen ray is as effective as radium. The seborrhoeic warts which are often seen on the face in elderly people are what may be termed precancerous lesions in that they are liable to undergo a malignant change. By curetting these lesions and giving them an intensive dose of Roentgen ray we prevent further trouble and leave the skin perfectly smooth and free from scar. For use in skin diseases the Roentgen ray has a much wider field of usefulness than radium, owing to the fact that we can treat large areas of the body surface at one time. The skin diseases in which the Roentgen ray is used most successfully are largely those which we formerly failed to cure by medicinal applications. In a general way, it is used in chronic

forms of skin disease, especially where there is marked alteration in the structure of the skin, and in all cases accompanied by severe pruritus, whether or not there is visible alteration or involvement of the skin. In acne vulgaris it is curative in a large percentage of cases. Mackee reports 98% cures in properly selected cases. My own results have been nearly as good. It is particularly the disfiguring type of acne with indurated lesions in which our best results are secured and if such cases can be treated before marked scarring has occurred they will be saved this life-long disfigurement.

In chronic eczema and in the eczematized form of ringworm good results are usually obtained by X-ray treatment.

In lichen planus the itching is often relieved by the first treatment and in time the lesions can usually be cleared up. The internal use of mercury or arsenic is often employed at the same time, because it seems to inhibit the formation of new lesions.

The Roentgen ray is frequently used in psoriasis, although, as with other methods of treatment, the disease will return in time. But it obviates the necessity of using chrysarobin and other disagreeable applications. By some dermatologists it is claimed that the interval of freedom from the disease is longer after X-ray than after medicinal cures.

In all these diseases the treatment consists of small or fractional doses, usually given at weekly intervals. The dosage is accurately measured according to the method developed in this country by Mackee and Remer. One-quarter of a unit is the average amount given at weekly intervals. In epitheliomata large doses are given—two units or more, and the normal skin is covered with sheet lead except for a margin of about one-fourth of an inch surrounding the lesion.

It seems almost unnecessary to say that the Roentgen ray is a dangerous agent if used in a reckless manner. But I have not yet seen a Roentgen ray burn where this method of dose measurement is used.

The mercury-vapor quartz lamp has a rather limited field in dermatology. The flat angiomatous naevi or port wine stains can be rendered much less conspicuous by its use. It is an excellent measure for stimulating the growth of hair in alopecia areata and for promoting the filling in and healing of chronic leg ulcers.

Carbon dioxide snow is a useful agent for removing certain types of moles, particularly on the face, because it causes very little if any scarring. Those moles having a growth of hair should first have the hair removed by electrolysis, that is, the passage of a fine needle into the opening of the hair follicle, using a current of 2-4 milliamperes and allowing the needle to remain in for from 30 to 60 seconds.

The same method is used in removing superfluous hair from the face in women except that a weaker current is used in order to prevent scarring.

In conclusion, it may be said that the prescribing and carrying out of remedial measures in dermatological cases has become a much more exact art than it formerly was. As in other branches of medicine, we secure good results if we make an accurate diagnosis and choose our treatment according to the exact requirements of the case. The use of ready-made remedies—and every pharmaceutical house has a salve on the market which is warranted to be good for all skin disease—has no place in modern dermatology. Such remedies correspond to the shotgun prescription of former days; they are just as unscientific and are rarely effective.

We learn from a reliable authority that "The Abbott Laboratories has just purchased the property, equipment and products of The Dermatological Research Institute, in Philadelphia. The well-

known 'D. R. I.' brands of arsphenamine and neo-arsphenamine will continue to be made there, under the direction of Dr. George W. Raiziss, who has done much for these products."

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EDITORIALS

LOOKING FORWARD.

(TO THE LEGISLATURE.)

Occupying as he does the position of a protector of humanity against disease, it is quite remarkable that the average physician should feel that he is belittling his dignity in defending from open assault this acknowledged right.

Yet this is the attitude assumed by many, whenever it has become our unfortunate privilege and necessity to appear before committees of legisla-

tive bodies at the State Capitol to protest the passage of laws inimical to public health.

The average law-maker is the average man, usually desirous of equalizing opportunities and his knowledge of what constitutes public health is vague; he is not a physiologist and he may believe with Still, the osteopath, that the human body is a machine. Still did not and the law-maker does not visualize its complexity, however, or the problem of metabolism, for with either, these things have never existed. Our law-maker may sympathize with these persons who practice chiropractic, these followers of Palmer, who believe (or they

do not) that all diseases originate from a common cause, to wit, the maladjustment of one or more vertebrae—whether mumps, pneumonia, appendicitis, erysipelas or toothache.

Preventive medicine, sanitation, and research are meaningless terms in the chiropractic code and it is most probably to these people unknown.

Education and not altogether censure should be our attitude toward the legislator, therefore, bearing in mind that any cult or 'ism tinged with a little mysticism still has, even in these modern days of disillusion, its followers and its lure.

Various absurdities have always been with us and probably will continue; we must needs, therefore, keep up the fight; not of necessity in the capacity of physicians, but as men through whose training and knowledge, exposure of certain reprehensible cults is possible.

It is our natural business to protect and defend every safeguard of common weal.

In this our duty is plain and unavoidable. Law-makers and others should understand that physicians do not ask that restrictions be placed upon competition, albeit this seems to be a common conception; what we *do* ask and what we insist upon is that these safeguards of human health that made the Medical Practice Act imperative, shall neither be weakened nor destroyed and we should emphatically subscribe to the sentiment embraced in the language of that eminent authority, Dr. Frederick R. Greene of Chicago, who spent eighteen years in the analysis of national public health measures, when he says: "ALL PERSONS DESIROUS OF THE SAME PRIVILEGES, SHALL BE REQUIRED TO COMPLY WITH THE SAME EDUCATIONAL STANDARDS." This quotation embraces the gist of the whole contention, irrespective of faith, school or creed.

It is this that we should impress upon the law-maker, and when accomplished, chiropractic will be relegated to its proper setting with the "voodoo," "Kneip cure," "Laying-on-of-hands" and the "Blue Glass" craze of years ago.

A PSYCHOPATHIC HOSPITAL.

Mental hygiene is a term which has come into general use very recently. Its exact definition is not possible, but to the physician and educated laymen the term means something fairly concrete. The foundation of the National Mental Hygiene

Association was laid by a non-medical man. Himself a victim of serious mental disease from which he recovered, in gratitude he set about to interest physicians and laymen in mental disease. Very much good is being done by this association, by its publicity campaign and its ability to enlist the advice and help of the best American mental specialists to guide the work. Surveys are being made of how the mental disease problem is being treated in different places and just now a representative of the National Association is making a survey of Rhode Island. That there is a lack in this State of facilities for dealing properly with this problem is evident to any careful observer. This lack is most evident in the facilities of reaching the early cases of mental disease. Mental disease once definitely established usually becomes permanent, although a surprising percentage of patients who have been committed to the State Hospital are able to be placed on parole temporarily or permanently. How much can be done to lessen mental disease by early recognition has not been fully demonstrated, but there is evidence enough at hand to convince that it is worth while to attempt it, and a reasonable amount of money spent in this way will bring results as it has done in other fields of public health work. It is evident that the movement should be guided by sound judgment and that all persons engaged in its administration should not be amateurs but thoroughly trained physicians and nurses.

It is anticipating the report of Dr. Williams on conditions in Rhode Island but it is safe to say that he will recommend the establishment of psychopathic hospital. Under present conditions people without means have no place to go for observation for mental disease without formal commitment to the State Hospital. The need of an institution for observation of mental cases has been evident for a long time and should be built at the earliest possible moment. Whether it should be a separate institution or connected with some existing institution is a matter deserving careful consideration. Whoever conducts it, there should be in close association with the State Hospital at Howard, the various clinics for mental diseases, the courts, and nursing associations who have special workers. By team work, something will be accomplished.

Not all the recommendations which Dr. Wil-

liams will make can be carried out, but the officers of the State Association, after careful deliberation, should select the most urgent and most useful of these and concentrate on them.

Not since the days when chains and other instruments of torture were stricken from the limbs of the insane, has such a stride been made in the care of mental disease and its prevention as is being made at the present time, stimulated largely through the National Mental Hygiene Association.

HOSPITAL STAFF ORGANIZATION.

It has long been realized by the managers of large industrial enterprises that even in the presence of ample financial backing, adequate equipment and an excellent personnel, the lack of a proper system of production spells inefficiency and failure. Such a system means organization and discipline, the assignment of a definite degree of responsibility to every officer and employee, quite as it is in the army. This principle applies equally to hospitals, especially the larger charitable institutions, whose efficiency depends on the properly correlated efforts of resident staff, visiting staff, nurses and employees. In such a hospital the visiting staff alone consists of a large number of physicians, surgeons and other specialists, all supposedly of proved ability, each in his line, but necessarily men of varied temperament, personality, and also a varied degree of industry and conscientiousness. In accepting a position on such a staff, carrying with it the privilege of caring for and studying large numbers of the sick poor and greatly enhancing his professional standing in the community, the physician takes upon himself very definite duties and obligations. In order that such duties and obligations shall be properly carried out and that no neglect or inefficiency on the part of those visiting physicians who may by nature be somewhat below standard in the matter of conscientiousness and devotion to duty shall remain unchecked it is absolutely essential that the staff be so organized that each individual member is definitely responsible to some colleague above him and that the heads of the various services are directly responsible to the superintendent and through him to the trustees of the hospital.

It is the belief of the JOURNAL that a reorganization of the staffs of the various larger hospitals

in the State is a crying need. Under the present system which leaves the visiting man free to care for or neglect his patients without supervision, according to the dictates of his own conscience, the average grade of work done is necessarily lowered by those whose efforts are somewhat perfunctory and whose real interests are elsewhere. Each service, as at present constituted in practically all our hospitals, is without a head and consequently without a policy and without the ability to consistently advance along any given line of endeavor. A conscientious visiting physician or surgeon working out some definite system of study or treatment during his short term of duty returns a year later to find that his labors have been wasted and his system destroyed by his colleagues who have supplanted him, some of whom may be less keen or conscientious than he, and whose ideas as to particular methods may differ decidedly from his. Furthermore, lack of encouragement of clinical research and the system of promotion by seniority have everywhere checked the efforts of those who wish heartily to progress. The result is threefold. First, and foremost, patients suffer in that they are in certain instances less adequately and systematically treated than they might be, because the visiting physician or surgeon has no one to direct or "check up" his work. Second, the physicians themselves suffer in that they are prevented by the lack of a proper system and proper encouragement in careful and continuous work, from developing themselves into experts and leaders in their profession. Third, the community suffers from the lack of just such experts who are much needed as consultants and who could well be developed from the more talented members of our own hospital staffs. The JOURNAL heartily recommends to the trustees of our larger hospitals which utilize the gratuitous services of private physicians, a program of complete visiting staff reorganization, placing at the head of each service some one member who is best qualified to occupy that position, and involving the principles of promotion on merit and a definitely graded responsibility as to duty which shall insure a maximum of skill and efficiency as regards the care of patients and shall allow each service to develop with some degree of continuity definite plans as to study and treatment of patients which shall be carried out by the members of each service as a unit.

SOCIETIES

PROVIDENCE MEDICAL ASSOCIATION.

October 2, 1922.

The regular meetings of the Providence Medical Association were resumed at the Medical Library October 2, 1922, at 9 P. M., the Vice-President, Dr. William B. Cutts, presiding in the absence of the President.

The records of the previous meetings were read and approved.

The application for membership of William A. Mahoney having been approved by the Standing Committee and there being no objection, the Secretary was instructed to cast one ballot for his election.

Dr. Frederick N. Brown arose to inquire about the stenographer and her duties. After considerable discussion, a motion was passed, leaving the matter to the Secretary and the editor of the RHODE ISLAND MEDICAL JOURNAL for solution.

The chairman announced the death of Dr. L. F. C. Garvin and appointed as a committee on resolutions Dr. C. F. Leonard, Dr. William R. White and Dr. J. E. Mowry.

Dr. D. L. Richardson informally presented the subject of anterior poliomyelitis as exemplified in the recent epidemic, emphasizing the fact that it is a contagious disease with an unusually problematic prognosis and the importance of preventing strain on the weakened muscle and subsequent contracture.

Discussion was carried on in the form of a symposium by the following speakers:

Dr. B. U. Richards presented charts showing incidence and mortality in different countries and States, including Rhode Island.

Dr. Charles V. Chapin emphasized the infectiousness of the disease due to a filterable virus in nasopharynx or lower intestinal tract, probably very frequent in a mild form of coryza in carriers not recognized, and because of this fact rendering quarantine practically useless.

Dr. C. A. McDonald brought out the fact that encephalitis lethargica and poliomyelitis may be the same general infection affecting various parts of the central nervous system and emphasized the important signs differentiating meningitis, encephalitis and poliomyelitis.

Dr. H. B. Sanborn continued the discussion from a neurological point of view, showing the close relationship in many ways of poliomyelitis and encephalitis lethargica.

Dr. C. D. Sawyer presented the pathological aspect of the diseases, together with the spinal fluid findings. Dr. M. S. Danforth urged the importance of early precaution to prevent deformity by protecting the weakened muscles against stretching. This concluding the official program, the subject was opened to general discussion and Dr. William H. Jordan discussed the subject from his experience in the recent epidemic, in which he advocated daily spinal puncture as part of the treatment.

The chairman announced the death of Dr. G. E. Simpson and appointed Dr. A. H. Harrington, Dr. H. A. Jones and Dr. D. L. Richardson a committee to draw up and present suitable resolutions.

The meeting adjourned with a symposium in verse by Dr. William R. White and Dr. Creighton W. Skelton. Attendance, 61 members, 3 guests. A special collation, which seemed to meet the approval of the members, followed the meeting.

RAYMOND G. BUGBEE,

Sec. pro tem.

PROVIDENCE DISTRICT SOCIETY.

Monthly meeting was held Monday, November 6, 1922, at Rhode Island Medical Society Library, Francis Street, at 8:45 P. M., and the following program was offered:

Symposium on post operative pulmonary sequelae. Discussion opened by Dr. C. O. Cooke, Dr. Harry L. Barnes, Dr. Jay Perkins, Dr. F. N. Bigelow.

Special demonstration of the film of the Providence Tuberculosis League, entitled, "Winning the Fight."

The Standing Committee has approved of the applications of Dr. James F. Boyd, Dr. Edward G. Melvin, Dr. John F. Oslin.

PETER PINEO CHASE, M.D., *Secretary.*

RHODE ISLAND MEDICO-LEGAL SOCIETY.

The Rhode Island Medico-Legal Society held its regular quarterly meeting October 26, 1922, in the Rhode Island Library, James B. Littlefield, Esq., presiding. He has advocated a membership campaign and 17 new members were voted in.

Richard B. Comstock, Esq., President of the R. I. Bar Association, spoke on the subject of "Mental Hygiene from the Layman's Viewpoint." He was especially impressed with the lack of facilities of observing the mentally sick in Rhode Island without commitment proceedings. He felt the need of revision of our present laws and the enactment of new ones to assist persons without means, who suffered from mental ailments, to be allowed proper treatment. He said there is no greater work the people of Providence can do than to get back of those who have devoted years to the study and treatment of mental diseases. He fully understands the stigma attached to the person, who by two physicians signing a certificate, is committed by the court, cannot be wiped out, also if a person has no money and is in mental distress he could see no reason why they should need be committed but should be sent to a mental hospital for treatment.

Dr. Arthur H. Ruggles of Butler Hospital spoke on mental hygiene from the physician's standpoint. He believes it the most important of present health problems. The medical profession has a great deal to learn as to the underlying causes of mental disease. We don't know those things, we are just beginning to get an inkling as to the road to follow, but it is a long one. We need the backing up of both the legal and the medical professions. We must also get the family physician to help and give his sympathetic co-operation. The most effective method of attacking this problem, the observation and the treatment of mental diseases, should begin in the schools, where the symptoms of most mental deficiencies first manifest themselves.

In discussion about commitment, Dr. Arthur H. Harrington of the State Mental Hospital, said there are only three ways in which a person can be admitted to the State Mental Hospital under the present laws. Persons without means are committed to the State institution when after receiving a certificate from two reliable physicians a court issues a mittimus. Second, a person with means can be taken there after two reliable physicians have presented a certificate to the State Penal and Charitable Commission and have obtained permission to send the patient to the institution. Thirdly, a patient can be admitted who of their own accord goes to the State Hospital and asks to be placed under observation and to be treated.

Twenty-one members and 17 guests were present and following the adjournment a light supper was served. JACOB S. KELLEY, M.D., *Secretary*.

RHODE ISLAND OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

The regular bi-monthly meeting of the R. I. O. and O. S. was held in the Rhode Island Medical Library on October 12th at 8:45 P. M., with President Dr. Blanchard in the chair.

The minutes of the previous meeting were read and approved. There were no outstanding committees to report.

Application for membership in the O. and O. S. was received from Dr. N. A. Bolotow and referred to standing committee for consideration.

Dr. Bigelow showed a very interesting case of laryngeal tumor, which was examined by all present, with a special discussion later by Dr. Bigelow and Dr. Abbott.

Dr. Bigelow reported a tentative plan which he trusts to carry out at the annual meeting of the Eastern Section of the American Laryngological, Rhinological and Otolological Society to be held in Providence Saturday, January 27th, 1923. The motion was made and carried that the O. and O. Society entertain the visiting surgeons who attend this meeting, and five dollars (\$5.00) be levied on each member of our Society to defray such expenses as may occur, any residue to return to the O. and O. Society.

Paper of the evening: "Indications for Radical Frontal Sinus Operation," with the report of cases, by Dr. Richard Travis Atkin of New York City. A paper very interesting and instructive, clearly and scientifically compiled, with the necessary X-ray plates to make it a remarkably well presented paper. The discussion was entered into by all, with a sense of keen interest.

Discussion closed by Dr. Atkins. A rising vote of thanks was tendered Dr. Atkins for his interesting and instructive paper.

Members present: Dr. VanBenschoten, Dr. Porter, Dr. Adams, Dr. Abbott, Dr. Fisher, Dr. Bigelow, Dr. Dowling, Dr. Messinger, Dr. Harvey, Dr. Ghazarian, Dr. Blanchard, Dr. Walsh.

Meeting adjourned at 10:30 P. M.

Standing Committee for the year: Frank F. McCabe, M.D.; A. Arlington Fisher, M.D.; Christopher J. Astle, M.D.

JEFFREY J. WALSH, *Secretary*.

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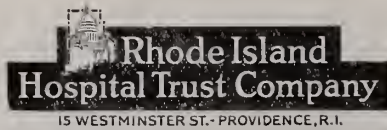
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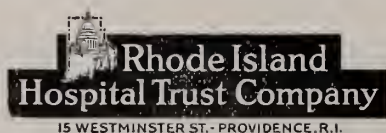
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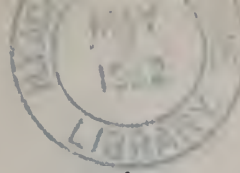
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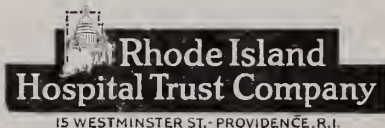
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Zymoline Oil Spray For atomizing the
 Nose and Throat

EDWIN P. ANTHONY
 Providence Rhode Island

THE CELEBRATED
BOOK ON THE PHYSICIAN HIMSELF
 FROM GRADUATION TO OLD AGE.
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FULL OF VALUABLE SUGGESTIONS

PUBLISHED BY THE AUTHOR, D. W. CATHELL, M. D.
 THE EMERSON HOTEL BALTIMORE, MARYLAND.

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Summer Diarrhoea, Fermentative Diarrhoea, etc.

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A new preparation, known as CASEC has been perfected by MEAD, which makes it possible to do away with the complicated side of preparing Protein Milk. The ease with which Protein Milk can be prepared with Casec has made it practical and widened its use, and now physicians, nurses and mothers may prepare Protein Milk with Casec with the same ease and accuracy as the preparation of any other milk modification in the home.

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for average infant
feeding.

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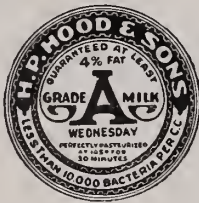
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for babies with
diarrhoea.

**MEAD JOHNSON & COMPANY
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GASTRON promotes coordination of the secretions and functions concerned in digestion; stimulates gastric, duodenal, pancreatic secretions — the concerted functions upon which depend good digestion, nutrition, health.

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was a milk for the personal use and *prescription* of the Medical Profession. This is its purpose now—always high in quality—always constant in composition.

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H. P. Hood & Sons
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Literature furnished only to Physicians.

MEAD'S CASEC
for babies with
diarrhoea.

**MEAD JOHNSON & COMPANY
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GASTRON

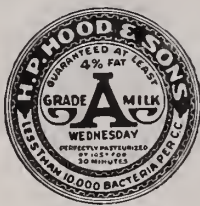
*Obtained by direct extraction
from the entire stomach mucosa*

Contains the activated principles of the gastric cells, the enzymes, the organic and inorganic constituents; of standardised proteolytic power.

Indicated in disorders of gastric function, gastric deficiency; a useful accessory, compatible with and contributing to the success of therapeutic measures—by promoting digestion and nutrition.

Alcohol and sugar free

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GASTRON

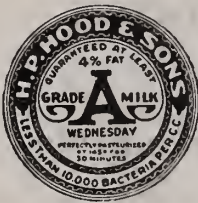
The gastric enzymes, plus

It is known that gastric function does not depend upon enzymes alone; principles, organic and inorganic, co-ferments that stimulate and maintain enzymic action are of essential auxiliary importance.

All the soluble organic and inorganic, activated and activating principles are present in Gastron, the entire extract of the stomach gland tissue. Clinically, against disorders of gastric function, gastron is exceeding the most sanguine expectations.

*Gastron, an acid-aqueous-glycerin extract
no alcohol, no sugar*

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**6 POINTS TO REMEMBER WHEN CHOOSING
MEAD'S DEXTRI-MALTOSE TO MODIFY
COW'S MILK FOR BOTTLE BABIES**

Point No. 1

It does not have directions on the package as these interfere with the doctor's instructions to mothers.

Point No. 2

It is not advertised in the woman's magazines as this is unethical.

Point No. 3

Literature on infant feeding is not mailed to mothers.

**MEAD'S
DEXTRI-MALTOSE
Dextrins and Maltose**

Has been used by thousands of physicians for over 10 years because it gives gratifying results in infant feeding and because it is a strictly ethical product.

A THREE WAY WINNER

10 days' trial will prove its value to the doctor, the mother and the infant.

THE MEAD JOHNSON POLICY

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his private prescription blank. Literature furnished only to physicians.

Point No. 4

It contains the proper food salts. Sodium chloride for average babies, Potassium Bicarbonate for constipated babies.

Point No. 5

It contains no protein, cellulose or fat. It is used as a malt sugar and a sugar it should be.

Point No. 6

It contains
Dextrins, 43%
Maltose, 52%
Moisture, 5%
These proportions were selected by Pediatricians.

SAMPLES AND LITERATURE FURNISHED ON REQUEST

MEAD JOHNSON & COMPANY

Evansville, Indiana

GASTRON

The gastric enzymes, plus

It is known that gastric function does not depend upon enzymes alone; principles, organic and inorganic, co-ferments that stimulate and maintain enzymic action are of essential auxiliary importance.

All the soluble organic and inorganic, activated and activating principles are present in Gastron, the entire extract of the stomach gland tissue. Clinically, against disorders of gastric function, gastron is exceeding the most sanguine expectations.

*Gastron, an acid-aqueous-glycerin extract
no alcohol, no sugar*

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Infant Feeding

Diet Materials

IF THE FORMULA IS WRONG SO WILL THE BABY BE

BABY A is a WELL Baby.

BABY B does NOT GAIN.

BABY C has CONSTIPATION.

BABY D has DIARRHOEA.

SHOULD ALL FOUR BABIES BE FED ALIKE? **YOUR ANSWER IS NO.**

They are DIFFERENT, and therefore need a different formula. That is why MEAD'S DEXTRI-MALTOSE is not supplied to the laity with directions printed on the label.

When mothers continue to make the mistake of feeding according to stock formulas which are not tolerated by their babies, digestive disturbances continue—even become worse.

The DOCTOR'S HEAD WORK, plus "D-M," COW'S MILK and WATER means gratifying results.

Samples, analyses and interesting literature on request.

THE MEAD JOHNSON POLICY

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MEAD JOHNSON & COMPANY
EVANSVILLE INDIANA, U.S.A.

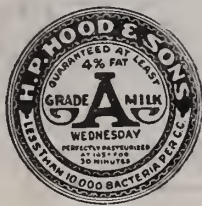
The actual direct benefits from Gastron
Are a known quantity,

unmistakably experienced by the patient, observed by the physician—in disorders of gastric function.

Inevitably the better digestion promotes better nutrition, strengthens resistance, encourages and heartens the patient, thus promotes a condition of body and a state of mind conducive to restoration.

In these circumstances there is an appeal for the application of **Gastron**; far-reaching indeed may be its ultimate good effects.

FAIRCHILD BROS. & FOSTER
New York



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Dairy Experts



CALCREOSE

CALCREOSE (calcium creosote) is a mixture containing in loose chemical combination approximately equal weights of creosote and lime. It has all the pharmacologic activity of creosote but has no untoward effects on the stomach; therefore it may be taken in comparatively large doses for long periods of time.

In the treatment of acute inflammations of the respiratory tract and infections of the gastro-intestinal tract CALCREOSE has been used with good success.

CALCREOSE can be given in comparatively large doses for long periods of time without any objection on the part of the patient.

Write for samples and literature.

THE MALTBIE CHEMICAL COMPANY
NEWARK, N. J.



Infant Feeding



Diet Materials

When you want it as you want it

The physician's individual feeding formula is what counts because he realizes that most of the baby's troubles are nutritional. Happy was the day when the physician himself changed the rate of infant mortality by prescribing feeding formulas for the individual infant.

In line with this thought Mead Johnson & Company co-operate with the physicians by offering their

MEAD'S DEXTRI-MALTOSE No. 1 for the average Baby

MEAD'S DEXTRI-MALTOSE No. 3 for the Constipated Baby

MEAD'S CASEC (Calcium Caseinate) for the Colicky Breast-Fed Baby

and various materials for making gruels, such as MEAD'S ARROWROOT and MEAD'S BARLEY FLOUR, all of which carry no laity directions on the trade packages.

These products are worth investigating and we would be very glad to describe their uses in meeting your individual feeding problems.

Upon application literature will be sent by return mail.

MEAD JOHNSON & COMPANY
EVANSVILLE INDIANA, U.S.A.

The actual direct benefits from Gastron

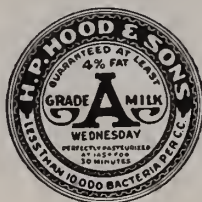
Are a known quantity,

unmistakably experienced by the patient, observed by the physician—in disorders of gastric function.

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FAIRCHILD BROS. & FOSTER
New York



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H. P. Hood & Sons
Dairy Experts



THE RHODE ISLAND MEDICAL JOURNAL



Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME V
NO. 7

Whole No. 154

PROVIDENCE, R. I., JULY, 1922

PER YEAR \$2.00
SINGLE COPY 25 CENTS

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Diagnosis of Discases of the Scalp.	Roy Blosser, M. D.	271
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ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I. UNDER ACT OF MARCH 3, 1879



*"Why Take a Chance,
When You May Be Sure, in
Treating Thyroid Insufficiency?"*

The most recent method of treating Thyroid Insufficiency is to administer two-grain doses of Standardized Thyroids t. i. d. until the usual symptoms of hyperthyroidism appear; then give small doses, [1-10 or 1-4 grain] to maintain balance.

The Armour Thyroid Preparations are stable and dependable. They are standard-

ized for iodine content and run uniformly.

The Armour Thyroid Products represent all the therapeutic properties of normal Thyroid glands unimpaired, as all desiccating is done in vacuum ovens at a temperature never above 105 degrees F.

We offer Thyroid Powder and 1-10, 1-4, 1-2, 1 and 2 grain compressed tablets.

Also

Suprenalin Solution	1:1000
Suprenalin Ointment	1:1000
Pituitary Liquid	1-2 c. c. "O & S"
Pituitary Liquid	1 c. c. "S & O"

Armour's Sterile Catgut Ligatures are made from selected lambs gut—plain, chromic and iodized: 000 to number 4

Literature to Physicians on Request

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1880
Same Management

A Man's Feet Carry 815 Tons a Day

"Anatomik" shoes support the feet in their normal position, enabling one to carry this weight in comfort; preventing and curing "fallen" arches, and other foot ailments. "Anatomik" shoes have been carrying men in comfort for 15 years.

Arrow shows where body weight falls in the wrong kind of shoe (left) and in "Anatomik" shoe (right).



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Family
Shoe Store

HOUSE OF GARDNER ... TAILORS ...

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Weybosset and Dyer Street

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ANY MAKE OF BATTERY REPAIRED AND GUARANTEED FOR ONE YEAR
WILL LAST LONGER THAN A NEW FACTORY BATTERY
ALL MAKES OF GENERATORS AND STARTERS REPAIRED

150-152 Broadway

Providence, R. I.

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NO. 8 } Whole No. 155

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ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879

"Just What a Ligature Should Be"

Armour's Catgut Ligatures, Plain and Chromic, boilable, strong, absolutely sterile, 60-inch, 000 to 4 inclusive.

Iodized Catgut Ligatures, non-boilable, strong, sterile and very supple, 60-inch, 00 to 4 inclusive.

\$30 per gross. Discounts on larger lots.

Also emergency lengths (20-in.) Plain and Chromic — \$18 gross

ELIXIR OF ENZYMES

—aid to digestion and vehicle
for iodids, bromides, etc.

SUPRARENALIN SOLUTION

—astringent and hemostatic.



ARMOUR AND COMPANY
CHICAGO

PITUITARY LIQUID

—ampoules, surgical 1
c. c. obstetrical ½ c. c.

6 in a box

Relieving Doctors of Investment Cares

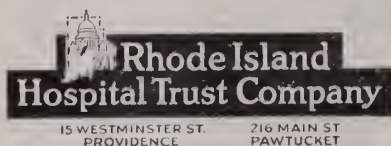
Most doctors find the responsibilities involved in the management of investments a heavy drain upon their time and energy.

By placing your securities in the hands of our Trust Department for proper care and handling, you are assured of obtaining maximum earnings from your investments and at the same time you are relieved from burdensome details.

This service includes holding securities in safe-keeping, collecting coupons and maturing principal as they become due, disposing of income as owners may stipulate, notifying owners of all pertinent information regarding bonds "called" for redemption, sinking fund offers "rights" to subscribe to new issues or to convert bonds into stock, and preparing ownership certificates for use in connection with income tax returns.

We are always glad to explain how this service can be utilized to the best advantage by individuals.

Ask one of the Trust Officers.



The Oldest Trust Company in New England

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NO. 9

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\$30 per gross. Discounts on larger lots.

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—aid to digestion and vehicle
for iodids, bromides, etc.

SUPRARENALIN SOLUTION

—astringent and hemostatic.



ARMOUR AND COMPANY
CHICAGO

PITUITARY LIQUID

—ampoules, surgical 1
c. c. obstetrical $\frac{1}{2}$ c. c.

6 in a box

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73 Westminster Street Providence

EDWARD G. CHACE, President
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WILLIAM C. ANGELL, Cashier
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Balances, Business and Responsibility warrants.

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Embracing every perfection of detail essential to the
success of any function large or small

Luncheons, Dinners
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Telephone Connection

Olneyville Square

CRAWLEY & SMITH

General Painters

Just finished the Medical Library Building

Telephone Union 5341-W

9 Park Avenue, North Providence

THE
BETZCO
LINE

Supplies and
Equipment
for
Physicians
and Hospitals

Frank S. Betz Co.
HAMMOND, IND.
Chicago, Ill. New York, N.Y.

Let this Catalog Help You Save Your Dollars

Not only does this Catalogue contain a complete line of standard instruments, dressings, rubber goods, bags, glassware, steel furniture, etc., but it includes as well, many new specialties that will be particularly interesting to you.

The general mailing has been completed and if you have not received your copy just fill out the coupon and it will be sent to you at once. This catalogue may be accepted as establishing a standard of fair price and honest value.

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Hammond, Ind.
New York
Chicago.

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IN
THE
COUPON

FRANK S. BETZ CO., Hammond, Ind.
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complete catalogue No. 22.
Name
Address
CJ

W. H. TOOHER CO.

Lauderdale Building
144 WESTMINSTER STREET
PROVIDENCE, R. I.

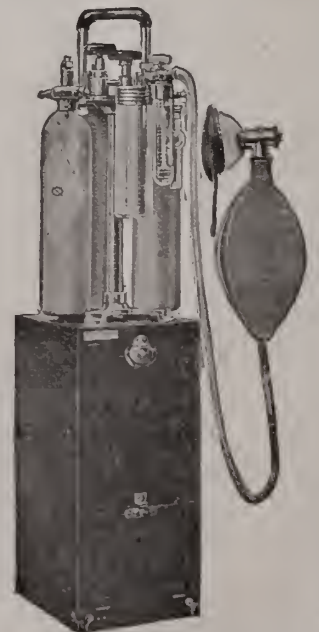
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Oxygen
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Apparatus
for
Surgical
and

Obstetrical
Anesthesia



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VOLUME V { Whole No. 157
NO. 10 }

PROVIDENCE, R. I., OCTOBER, 1922

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ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879

*The PREMIER Product of
Posterior Pituitary active principle*



Headquarters

for

the

ENDOCRINES

PITUITARY LIQUID (Armour)

free from preservatives, physiologically standardized.

1 c. c. ampoules surgical, $\frac{1}{2}$ c. c. obstetrical.
Boxes of six.

A reliable oxytocic, indicated in surgical shock and post partum hemorrhage, and after abdominal operations to restore peristalsis.

Suprarenalin Solution 1:1000—Astringent and Hemostatic

Water-white, stable. In 1-oz. bottles, with cup stopper. Of much service in minor surgery. E. E. N. and T. work.

ARMOUR AND COMPANY

CHICAGO

INVESTMENT INFORMATION

The investor should always remember the virtues of caution and investigation.

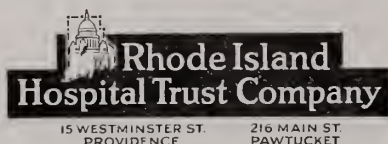
Many good investment opportunities there undoubtedly are, but how to find them in the maze of good, bad, and indifferent offerings is the problem of both the experienced and the inexperienced investor.

For the benefit and protection of our customers, this Company maintains a department whose special business is securing any desired information on matters related to investments.

Whether you have under consideration listed or unlisted securities, or new offerings, the department will be glad to assist you in making a decision.

This service is rendered without charge.

Ask for the Investment Officer in our banking rooms.



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BETZCO
LINE

Supplies and
Equipment
for
Physicians
and Hospitals

Frank S. Betz Co.
HAMMOND, IND.
NEW YORK CHICAGO
WASHINGTON ST. LOUIS

Let this Catalog Help You Save Your Dollars

Not only does this Catalogue contain a complete line of standard instruments, dressings, rubber goods, bags, glassware, steel furniture, etc., but it includes as well, many new specialties that will be particularly interesting to you.

The general mailing has been completed and if you have not received your copy just fill out the coupon and it will be sent to you at once. This catalogue may be accepted as establishing a standard of fair price and honest value.

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Hammond, Ind.
New York
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THE
COUPON

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PROVIDENCE, R. I.

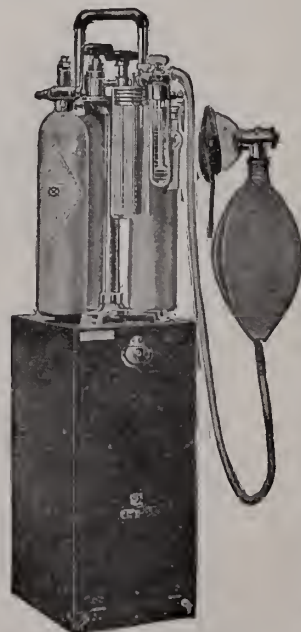
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Supplies

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Apparatus
for
Surgical
and

Obstetrical
Anesthesia



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VOLUME V
NO. 11 } Whole No. 158

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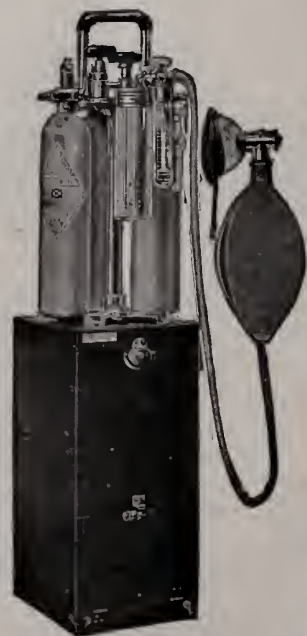
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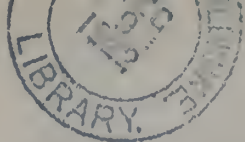
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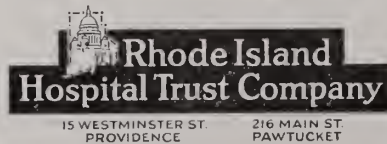
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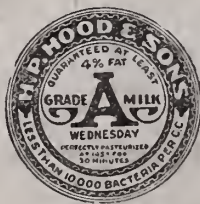
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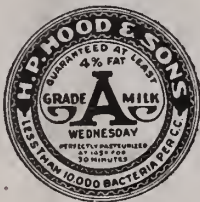
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